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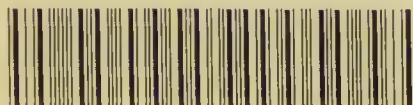
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# OBSERVATIONS

ON

HEPATIC DISEASES,

INCIDENTAL TO EUROPEANS

IN THE



EAST-INDIES.

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By STEPHEN MATHEWS,

SURGEON IN THE HONOURABLE UNITED EAST-  
INDIA COMPANY'S SERVICE,

AND

Formerly of the Duke of Portland East-Indiaman.

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L O N D O N:

PRINTED FOR T. CADELL, IN THE STRAND.

M.DCC.LXXXIII.





TO  
Sir Henry Fletcher, Baronet,  
MEMBER OF PARLIAMENT  
FOR THE  
COUNTY OF CUMBERLAND,  
AND  
CHAIRMAN OF THE HONOURABLE THE COURT OF  
DIRECTORS OF THE UNITED COMPANY  
OF MERCHANTS TRADING TO THE  
EAST-INDIES.

S I R,

**T**HE very great honour you  
have conferred on me, by  
patronizing the following sheets,  
is an additional testimony to the  
world of that amiableness which

A

so

ii. D E D I C A T I O N

so eminently distinguishes your character among all ranks of the people. So benevolent a disposition, and which is ever displaying its influence, cannot fail of exciting admiration and applause. Alive only to these impressions, permit me to contribute my most grateful thanks for this public mark of your favour; a favour which must convince mankind that every attempt (however trivial) which may any ways tend to alleviate the distresses of, or produce the smallest advantages to the servants in the

Honourable



DEDICATION      iii.

Honourable Company's service,  
will ever meet with your appro-  
bation and encouragement.

I am, SIR,

With the greatest respect,

Your much obliged,

And most obedient

Humble servant,

STEPHEN MATHEWS.

London, May 1, 1783.

1774-1775

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# P R E F A C E.

**W**E do not intend to amuse our readers by commenting on the utility of the following Observations, or by enumerating the advantages that may arise from a more extensive and general knowledge of the disorders peculiar to the Honourable Company's settlements in the East-Indies) enlarge on the principles hereafter advanced: on the contrary, we have endeavoured to render the whole as concise and comprehensive as the nature of the separate parts would admit, being well assured, that by strictly adhering to the exact state of each individual's case, and from thence drawing our conclusions, we should not only be more precise on the subject, but arrive at a greater degree of certainty and perfection.

We

We have divided this Work into three parts, and each part into different chapters, for the more easy reference to any particular enquiry that may be wanted, and also to make it more conspicuous and clear.

The examinations and comparisons of the blood, in the two different disorders, were made as carefully as possible, and the dissections were also minutely attended to, that the illustrations might be more convincing, and corroborate the sentiments entertained of the seat and existence of the complaints; which proofs, perhaps, may either serve as a foundation for other gentlemen of the faculty, who are not so conversant with these disorders, by not having the same opportunities, to satisfy themselves, or tend to promote more universal inspection.

The following sheets are the result of an extensive and successful practice, digested



gested from the daily minutes and extracts made at the different periods of the diseases, which we flatter ourselves have enabled us to relate minutely and circumstantially the most material observations that are requisite for information, either to distinguish the causes and nature of these diseases, or to adopt and promote a mode of application suitable to the exigencies of the patients. This has been our principal view in the compilation of the subsequent work: and however inaccurate in description it may be, we rest it entirely on our indulgent readers; trusting that the intention of benefiting mankind, by attempting to mitigate the ravages of destructive distempers, will in some measure expiate for the imperfections and inelegance of the composition.

# ERRATA.

Page.	Line.	
27	3	<i>for attain read retain.</i>
42	27	<i>for precedes read proceeds.</i>
52	10	<i>for posts read ports.</i>
67	4	<i>for the epithet read our opinion.</i>
71	2	<i>for British settlements read British and Spanish settlements.</i>
88	25	<i>for alvetics read aloetics.</i>
95	20	<i>for cure read remission.</i>
113	5	<i>for the patients read the enfeebled subjects.</i>
114	13	<i>for apthee read apthæ.</i>
128	25	<i>for bark read briik.</i>
133	25	<i>for restoration read restorative.</i>
138	3	<i>for this viscus read the liver.</i>
139	9	<i>for afflicted read enfeebled.</i>
140	25	<i>for female read feeble.</i>
163	15	<i>for running off by read running off speedily by.</i>

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# OBSERVATIONS

ON

## HEPATIC DISEASES.

### PART I.

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#### CHAP. I.

##### *Of the Causes of Hepatic Diseases.*

THE various changes and different appearances of bilious diseases, the latent principles of which pervade the constitutions of the greatest part of Europeans who reside at, or have any intercourse with, the Hon. Company's settlements in the East-Indies, are objects of such moment as to justify the minutest investigation of the sources from which calamities so general proceed. Not that

a superabundance of bile, or other hepatic complaints, are the sole predominant diseases of the East Indies; but we are inclined to think, that whatever may be the causes of many other disorders, the general termination is blended with bilious symptoms, and whoever has had much practice in the Hon. Company's service, or on board their ships, we make no doubt will readily acquiesce in this opinion.

This is farther justified by the mode of practice so universally adopted without much alteration, by the gentlemen of the faculty. Could we confine bilious complaints to the aged, who are doomed to encounter disease in some of its shapes before dissolution takes place, or to those who, naturally possessed of a good constitution, take unbounded liberties with their health, merely to accommodate themselves to their convivial companions: could we, I say, confine complaints, which are inseparable from irregularities, to those only who by their imprudencies  
merit



merit them, it would at once fix the fundamental point of medical disquisition on this subject. But, when we observe that persons of all ages and both sexes, the abstemious and the debauched, the healthy and the vigorous, the aged and the young, are alike vulnerable by this potent enemy, we cannot too much lament our inability to prevent similar complaints originating in wide and extensive causes.

From this doctrine we are enabled to account for the inefficacy of medical practice; for where the symptoms are so fluctuating, and the same disease is continually assuming a different aspect, the treatment of patients must be attended with no small trouble and perplexity.

The judicious practice and valuable observations of many of the Company's surgeons will ever do them the greatest honour; and we are fully warranted in observing, that the surgeons in the Company's service, and on board their ships, have abilities equal to the arduous task of their employment.

The climate of the Company's settlements may be divided into three portions, viz. the hot, the rainy, and the cold seasons. Two of these periods may be deemed unhealthy; for, although in the hot months there are not perhaps so many immediately ill, yet we generally observe that the first stamina of the disease are laid at this time.

Great and continued heats will ever be a primary cause of disease in the animal frame. Long and heavy rains, with sudden appearances of the sun raising offensive exhalations from the moisture of the earth, we are disposed to think will be the acting power to the principles of disease originated in the former season: and if we take a comparative view of the quantity of exercise used by the generality of Europeans, in these periods, with that of which they partake in the colder months, we shall be induced to believe that inactivity is an additional cause of bringing forward those dormant symptoms of disease, which were before ripening to maturity. But the great period of  
epi-

epidemical distempers is generally fixed between the cessation of the rainy and the commencement of the dry cooler season. This juncture is more alarming and pernicious to Europeans than any other season of the year.

If we take a review of the state of the atmosphere during the rains, and the consequences resulting from the earth being overloaded with water, and the powers of absorption choaked by the same cause, we shall easily conceive how disagreeable such a situation must prove, and most readily join our opinion with those, who experience the fatality of these transitions. As the rains diminish, the sun frequently bursts forth with great heat, and, as the season declines, his appearance, though pleasing, is more pernicious; for the sun's rays, being almost continual, occasion a heavy exhalation of various vapours, which cannot by any means be salutary. To an atmosphere, therefore, impregnated with different effluvia, assisted by the heat of the sun peculiar to these climates, and the moisture of the earth, we are not



in any suspense, independently of other materials, to impute the predisposing causes of bilious diseases.

The effects of heat and moisture on the animal frame are nearly alike, by producing relaxation and putrescency; for, in examining the bodies of those who fall by this disease, we observe a total relaxation of all the muscular system; and let the dissection be ever so early after death, a great degree of putrefaction in the fluids of the stomach and abdominal viscera. Neither is the putridity in the animal juices regulated by length of disease. The strength and vigour of the suffering patient are a much more just criterion of the violence of putrefaction, than any we have for our instruction.

We find that long continued heats, or great moisture, are productive of relaxation of the muscular system, and dissolution of the animal fluids. To what degree are we to expect our patients to be attacked, who are affected by the combinations of these powerful causes acting on the



the frame of strong muscular men, whose juices are unimpaired, and their health heretofore entirely perfect. Certainly and invariably these persons will suffer more, and be in much more imminent danger, than others of a contrary formation; and those Europeans who have resided long in India, although they are liable to frequent attacks of the same disease, yet have their habits and constitutions so tempered by the climate, that they will bear a much greater portion of disease, than others of the same habit, who are recently arrived from Europe. These observations are common and well known to every European in India, therefore tend to corroborate and fix our opinion on this point.

The climate of India in itself is so pernicious to the constitutions of Europeans in general, as to occasion diseases of a most inveterate nature, and which, without the greatest care and attention both of the physician and patient, will terminate either in obstinate and cruel obstructions, or by a more speedy way deprive

the patient of all his flattering expectations of recovery, by the last great tribute nature can render to disease.

In this situation great respect ought to be paid by all those who are valetudinarians, or who enjoy their portion of health, to regimen and exercise. However this advice may be tinged with medical precept, yet, surely to the rational part of mankind the task will not seem too arduous, nor the means unpleasing, particularly as the point in view is, to preserve the greatest blessing that can be bestowed upon the human race.

Many in their line of employment are unavoidably exposed to imprudencies of diet and other irregularities; others voluntarily plunge themselves into various excesses. These gentlemen will do well to consider what powerful enemies they have to encounter, and the great chance there is against them of their ever being able to reinstate their health: for from the effects of climate and their own injudiciousness, every thing is to be apprehended; and  
how

how miserable must the life of that man be, who is continually harrassed by aches and pains, and whose every moment of relief is purchased by the repeated use of medicines ! These are observations which ought to teach us the value of health, and make us exert ourselves cautiously to preserve it.

The solids and fluids of the animal frame being so relaxed and dissolved by the combined powers of heat, moisture, putrid effluvia, and irregularities of different natures, that we cannot expect the various secretions which are incessantly going on for our support and preservation to be compleated or salubrious ;—consequently, some latent principles of disease will take place, and may perhaps a long time lie dormant, before the patient is awakened to his danger by the more inveterate symptoms of it ; and if he does not instantly obtain medical assistance, the event will be very short and fatal. Much therefore will depend on the due and most strict observation of medical advice.

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The relaxation, already produced by a long continuance of heat, naturally occasions a great languor in the arteries, whereby their coats are deprived of their proper elasticity, and the pulsations are so much enfeebled, that the momentum of the vital fluid is greatly retarded.

From this cause, which we may suppose the primary one of succeeding diseases, occasioned by a dulness of circulation, and a slow fulness of the blood's motion, which considerably diminishes the force of the acting powers in the animal fabric, every part of the human organization will undergo great and sudden changes. From the want too of a regular tension and rigidity of the muscular system we observe many undue and imperfect secretions to succeed. The state of the fluids, from the same circumstances, will be impaired; and very irregular in their different channels; consequently, for want of that particular power, which nature in a state of health always commands, the juices will be rendered unfit for animal uses. Hence obstructions of different kinds  
are



are too prevalent, and those viscera and canals which have the greatest quantity of fluids passing through them, are most likely in this case to be the seat of the disease. For when the *vis resistendi* of any body is accelerated or abated either progressively or retrogradely, we are to expect accumulations, with other inconveniences that will naturally follow. When this state of putrescency and relaxation has once fixed itself in the animal frame, we shall readily conceive the effect that moist air will have on bodies thus prepared for the reception of various complaints. The air being now filled with a great variety of particles exhaled from an inundated earth and nitrous soil, condensed by the autumnal sun, makes the effluvia abound with most pernicious qualities, which will invariably be taken up by the powers of absorption, and likewise inhaled by the lungs. These remote causes being drawn into one given focus (the human frame) the resulting consequences will not be tedious.

The

The mode of diet made use of by Europeans in India (although now considerably restrained) is by far too liberal for the habit of body and nature of the climate; and as all animal foods in hot and moist seasons, have a very great septic tendency, it surely is adviseable to be abstemious in this matter, and to regulate the quantity of liquors by that of diet; for when fish flesh, poultry and pastry, with wine, beer, and spirits, cheese, butter, and fruit, are at one repast, all indiscriminately plunged into the stomach, it is an evident fact, without entering into any chymical or physical reasoning upon the subject, that the powers of digestion must be weakened, and the chyliiferous juices badly assimilated. Hence indigestions, crapula and flatulency immediately proceed, and if not speedily relieved, the hepatic diseases will most assuredly be fixed. From the reasoning already employed, we may easily deduce that the greatest preservation of health principally rests with the inhabitants themselves; and however ineffectual physical admonition may prove on this subject,

ject, it will fully sanctify this well-known adage, that “it is much easier to prevent diseases than to cure them.”

As the air, soil, and situation of the Hon. Company's settlements have some affinity to our subject, it will be necessary to take a cursory view of each before we proceed to relate its diseases, and then, by forming a comparative prospect of the whole, draw such inferences as may tend to alleviate the distresses inseparable from them.

## C H A P. II.

*Of the Air, Situation, and Soil of Calcutta.*

CALCUTTA, in the province of Bengal, is the metropolis of all the Company's settlements: and is situated on the banks of the river Hughly (a branch of the great Ganges) which is navigable, ebbing and flowing exceedingly regular. At the different periods of spring and neap tides, the water swells and sinks very much. By these means a great quantity of mud and foul earth is thrown on the banks of the river, which, during the flux and reflux of the tide, by the great continued heat of the sun, emits a most disagreeable and offensive vapour in the atmosphere. This occasions all those houses near the banks of the river to be more unpleasant than in the interior part of the settlement. Although the natives of this province are, in most particulars, remarkable for their cleanliness; yet, such is the force of precept and custom, that whenever nature prompts, a Hindoo



Hindoo pays no respect to place ; neither has the police of Calcutta yet been able entirely to prevent this practice, and, until more severe penalties are inflicted, the grievance will certainly exist. It is a circumstance much to be regretted, that the elegant range of buildings on the esplanade, which are by far the most pleasant of any in Calcutta, should be so much incommoded by the continued assembling of the natives to pay their devoirs to the goddess Cloacina. The habitations are regularly and well built, the rooms spacious, lofty, and exceedingly well adapted to the heat of the climate, which, during the months of February, March, April, May, and June, is intensely hot. The months of July, August, September, and October, may be deemed the moist and rainy season, though it is not always exactly confined to these. November, December, and January are the cool and pleasant months ; and in this period Calcutta may vie with any part of the globe for salubrity and agreeableness. The country surrounding this town is a very large tract of low flat ground, unoccupied

pied by any hills or mountains; hence the air is not duly ventilated, which, during the rains, and some time after, is more humid and corrupt.

A second great inconveniency is the impurity of the water; and if we are not mistaken, it is the usage with the inhabitants to reserve the rain in jars, for their domestic uses; and although there are many tanks in Calcutta, and some of them very large and deep, particularly one in the center of the great square; yet, as many of these are mere reservoirs of rain water, and but little assisted by subterraneous springs, we are very confident that this must be pernicious to the human frame, and greatly assist in producing disorders. The soil of the country for the most part, is sandy clay, and nitrous earth, which, during the hot dry months, produces little or no vegetation; and by the great quantity of water that falls in the rainy period, the earth is overloaded, and cannot absorb it fast enough to prevent great quantities of stagnant pools from collecting in different

rent parts, which afford an additional humidity to the atmosphere, and breed thousands of insects, which die and rot on the ground.

When the Monsoon \* from the northward is thoroughly set in, the air becomes pure, dry, and very healthy, and in proportion to the duration of the different seasons, we may estimate the healthiness or sickness of the inhabitants: for, if the winter period is cold, and of long duration, the air will be so cleansed and tempered, that very few diseases will be epidemical or permanent; neither will the ensuing hot season be productive of so many latent principles of disease. On the other hand, if the progress of the heat is long, intense, and succeeded by heavy and prolonged rains, we have every reason to apprehend a fatal and sickly season.

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There

\* Monsoon, a species of trade wind, peculiar to the East-Indies, which, for six months, blows nearly  
on



There are not many wood-lands contiguous to this settlement, which we naturally determine to be a favourable circumstance; but there are many very large and extensive lakes, with a great number of tanks, natural and artificial, which all tend to increase the moisture of the atmosphere, and preclude the salutary effects of variable and light winds. Diseases generated at this time are much more tedious and difficult to remove, and their effects more severely felt, than of those complaints which arise from inflammatory and putrescent sources in the hot months. Another circumstance meriting our consideration, is the suppression of exercise during the wet season; for Europeans, at all times here, are rather inclined to indulgence; and if the necessary quantity of exercise or amusement is not continued to which the constitution has been accustomed, the event will be productive of indisposition. There are more errors committed

on the same point of the compass, and from the contrary on the other six.

by



by indulgence than excess of exercise, provided that after recreation and employment the necessary precautions are made use of to prevent the impression of cold.

It will undoubtedly be a great improvement to this settlement, and also add much to its healthiness, when the police have effected the great undertaking of draining, raising, and widening the streets. By these means the accumulated stagnated water will be carried off, the streets become more commodious and pleasant, and the air less loaded with septic miasmata. The good effects arising from these labours will fully compensate the inhabitants for any expence attending these improvements.

## C H A P. III.

*Of the Air, Soil, and Situation of Madras.*

**M**ADRASS is the capital settlement on the coast of Coromandel. It is an exceeding regular and well built town, circumscribed with one of the most compact fortifications in the East-Indies. The air here, when the sun is far advanced in the northern tropic, is for some part of the day intensely hot; but as this is of short duration, the inconveniences arising from it are in no degree equal to those at Bengal. Early before noon the cooling breezes set in from the sea, and render the succeeding part of the day exceedingly pleasant and salutary. This settlement may justly be deemed the Montpellier of India; for you scarce see one inhabitant, who is commonly prudent, carrying about him any trait of disease. We do not absolutely assert that the atmosphere would not be more salubrious, if effectual precautions were used to prevent the natives from making so much use of the beach; which being situated very near the houses, and always directly

directly to windward of the settlement; is incessantly impregnating the air with offensive odours. The land winds at this season of the year are generally very hot and dry, though by no means unhealthy; for it is customary to sleep in the air, out of the immediate current, without any pernicious consequences attending it. The soil, both here and on the circumjacent country, is very dry, and mostly sandy; and although the country is one continued level, excepting a small hill, called St. Thomas's mount, rising a little above the surface of the sea, the soil fully compensates for the flatness, as the rains are but of short duration, and not so violent and heavy as in the former settlement. The earth being of a much looser texture, and having greater absorbing powers, the pernicious effects of stagnant septic pools accompanied with baneful exhalations, are seldom if ever experienced.

The bilious complaints that predominate here, are by no means so inveterate or fatal as at Calcutta, and hepatic ob-



structions are more easily and speedily cured. The fevers arising from inflammatory causes generally terminate in remittents, for which reason they much sooner retreat by the powers of medicine. The great Monsoon, which takes place late in the autumn, is generally attended with brisk and strong winds; therefore if the rains fall exceedingly heavy, the atmosphere has not time to accumulate many infectious qualities, and the inhabitants have not any apprehensions from a quantity of water lodging on the earth, which may be sometimes tedious in absorbing, though at this period it is not judicious to be too much exposed to the nocturnal air. In the petit monsoon in the vernal season, the same reasoning will hold good; for should the atmosphere be too much impregnated with dampness, the relaxed state of the body will be apt to imbibe moisture, which will check and stop perspiration (one of the first and best prognostics in this country of a sound state of health.) This will be the source of remitting fevers, hepatic, and sometimes sanguinary fluxes.

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In this case, an early application to the faculty is absolutely necessary, for by protracting the disease, the patient does not only prolong and render the cure more uncertain, but stands a very fair chance for its continuance, until the dry season is thoroughly fixed. A second cause may be estimated to originate in the quantity and quality of † fish of different genera, which make part of every inhabitant's diet; and although they are deservedly esteemed for their great perfection, yet we do venture to pronounce the effects of such regimen to be diarrhæas and dysenteries, particularly when assisted by the co-operating powers of § cold flatulent fruits and ‡ vegetables. The residents of this settlement are not confined or necessitated to suffer the inconveniences of inactive life: there are but few

† Prawns and other shell fish, eels, and cat fish, &c. are particularly septic and purgative.

§ Plantanes, melons, and all other cold fruits, are highly pernicious.

‡ Cucumbers, and all of this genera, have a very great tendency to fermentation and putrefaction.

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days

days in the year that they cannot partake of the pleasure of riding, which, if we may be permitted to advise, is much more beneficial on horseback than in a chariot, which is too inactive and indulgent.

The water which this settlement is supplied with, is remarkable for its purity and goodness, and is at all seasons of the year very nearly at the same standard of perfection, consequently, this is a very singular advantage to the inhabitants, and the means of preventing many disagreeable inconveniencies.

## C H A P. IV.

*Of the Air, Soil, and Situation of Bombay.*

**B**OMBAY is an island situated on the north-west extremity of the Malabar coast, in nineteen or twenty degrees of north latitude, and seventy-five or six east of London. It being within the fixed limits of the monsoon, the air is in general more fresh and durable than at Calcutta, and the extremes of intense heat are seldom prevalent; for however much the land winds may affect this settlement, yet it is an invariable observation, common to all, that the sea breezes in either monsoon, will render ample refreshment for the sultry nocturnal airs.

The town is irregularly formed, and rendered more incommodious by the natives being permitted to reside within the fortification (a circumstance not allowed in any other part of India;) add to this inconveniency others of a more dangerous and disagreeable nature, viz. the hospital  
being

being placed in the middle of the town, and the warehouses for salted provisions belonging to the navy contiguous to it, which are too often, receptacles for putrid rotten meat. They emit a most noisome effluvia throughout the settlement. The police of this presidency would do well to consider the consequences that are likely to take place from these causes, particularly in the time of war, when the storehouses are filled with provisions, which if too long kept become putrid, and the hospitals crowded with wounded diseased patients and valetudinarians. It is much to be regretted, that the unfortunate situation of all these receptacles is a real and grievous nuisance to the inhabitants. What may we not apprehend from these great sources of evil, should epidemical or pestilential diseases take place !

The wet season here is nearly the same as at Bengal, though the rains are not so continual, and the soil more favourable for receiving them. Yet we do not experience so much temperature of the atmosphere on this account, because the  
sudden



sudden interposition of the sun (which, during the greatest part of their falling, is vertical) occasions the heated earth to retort a most oppressive and sultry moist vapour, which seldom rises above the level of the air we respire.

The island of Bombay itself is mostly flat and low. Adjacent to the bounds of the esplanade is a very large wood of cocoa-nut† trees, which are not only advantageous, but make the rides more

† Cocoa-nut trees run up an amazing height, before the foliated branches spread out. The foliage is very little, and does not retain much moisture, consequently the groves are not unhealthy; and, if we may draw our determinations from the healthiness of the crowds of natives who inhabit these topes, || we shall readily assent in opinion, that the effects are not prejudicial. The cocoa-nut tree is in high estimation with the Indians, who apply it to almost every purpose of life, viz. fuel, timber, blacking for paint, oil, spirits, vinegar, wine, water, fruit, vegetables, bark for canoes and dying, cordage, cables, twine and thread, charcoal for gunpowder, food for cattle, materials for thatching, salt, sugar, sails, milk, tools of various sorts, hats, mats, beds, and other furniture.

|| Tope. An Hindostan term for a grove or wood.  
pleasant

pleasant and agreeable. The continent that circumscribes this island is very mountainous and hilly, so that the air will not only be more ventilated, but more pure and frigid. To this cause we are in a great measure indebted for the salubrity of this settlement. The residents are not addicted to errors of diet; their general mode of living is very frugal and æconomic. We do not presume to investigate the cause, why Europeans, who reside nearly in the same situation are not equally luxurious; suffice it to observe, that every individual will experience the salutary effects of this judicious method. By a chymical analization of the water in general use here, we find it less impregnated with earthy particles than at the former settlements, consequently it is lighter and more pure, therefore better suited to the human stomach and natural secretions.

It is an unpleasant task to be under the necessity of repeating our former observations on the neglect of the police, and the filthiness of the natives, who take the  
same

same unwarrantable liberties here as at the former presidencies. As long as the esplanade continues to be the mall of Bombay, it will be a bar to the pleasure this situation would otherwise afford. It may be questioned whether, if the natives are not to be restrained by lenient measures, (those that are vigorous being in some instances detrimental) it would not be good policy to have stated privies deeply sunk in the earth, and compel all those who stand in need of these conveniences, to make use of them under forfeiture of severe and heavy penalties, which we humbly conceive will ever produce more ready obedience from these people, than all the terrors of flagellation, chains, and dock-labour?

Fetter'd slavery, with scanty allowance of bad provisions, will ever incur a just reproach, and insure a stigma on those acts of legislative power; as punishments, though necessary, yet doubtless ought ever to be blended with mercy.

The



The diseases common to this place are all of the bilious kind, though not so inveterate as at Bengal, consequently the cure will be more easily effected; and, if we compare the number of valetudinarians with the healthy in this presidency, we do not think our opinion too hastily drawn when we determine it a healthy settlement.



## C H A P. V.

*Of the Air, Soil, and Situation of Bencoolen.*

**B**ENCOOLEN, on the south-west coast of the island of Sumatra, in four degrees of south latitude, and one hundred and two degrees east of London is a very irregularly built place, the principal object in raising houses being confined to air and dryness: therefore uniformity cannot be expected. Were the habitations erected after the European fashion, it would entirely subvert the salutary effects arising from a free current of air circulating round the houses. The country adjoining to fort Marlbro' is a long range of low flat ground, abounding with coppices and woods, and by the quantity of rain which is daily falling, the earth is in general exceedingly swampey and wet, which with long intervals of calms and light winds, and the interposition of the sun, renders the atmosphere exceedingly moist and sultry. All places situated on or near the equator, are subjected to a  
much

much greater variety and sudden changes of weather, than those parts of the earth which are placed more remote from that region of heat. In this instance we cannot too much admire the just and accurate ordinances of Providence, which by these means has rendered such situations comfortable and desirable. Comfortable, comparatively speaking; for did not these transitions take place, it is a problem of easy solution, that these and such like islands would be desolated, and receptacles only for beasts and birds of prey:---desirable, for the abundant advantages reaped by private commercial gentlemen, and more so, as it tends to promote the culture of an art† so beneficial to the honourable Company, and which, if duly respected, will be of cer-

† Distillation of Arrack. Bencoolen is the first English settlement in the East-Indies that has made any attempts towards manufacturing this commodity. The obstacles which clogged this business in its infancy are now done away, and the process goes on with great spirit. The arrack made here is equal, if not superior, to that of Batavia; and this settlement will, in a very short time, be able to supply India and Europe with this excellent liquor.

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tain and very great advantage.—In the progressive point of view, we not only observe the civilization which is daily taking place, but the large strides which are incessantly taken by all ranks and orders of men to facilitate and cement the link of that one great chain, human interest and felicity.

This settlement, during the northerly and westerly winds is generally healthy; but when the easterly and south-east are prevalent, (which blow over a vast tract of woody and swampy ground) it is a certain preface to destructive and fatal diseases. The residents here are well aware of the justness of this position, by the baneful effects so often occurring among them, and the resulting destructive consequences of interrupted broken societies. From the causes already assigned, we shall readily conceive the state of the atmosphere, which at these periods is low and dense; and were it not for the great quantity of thunder, (a constant companion of these climates) the air would be totally obnoxious to the human  
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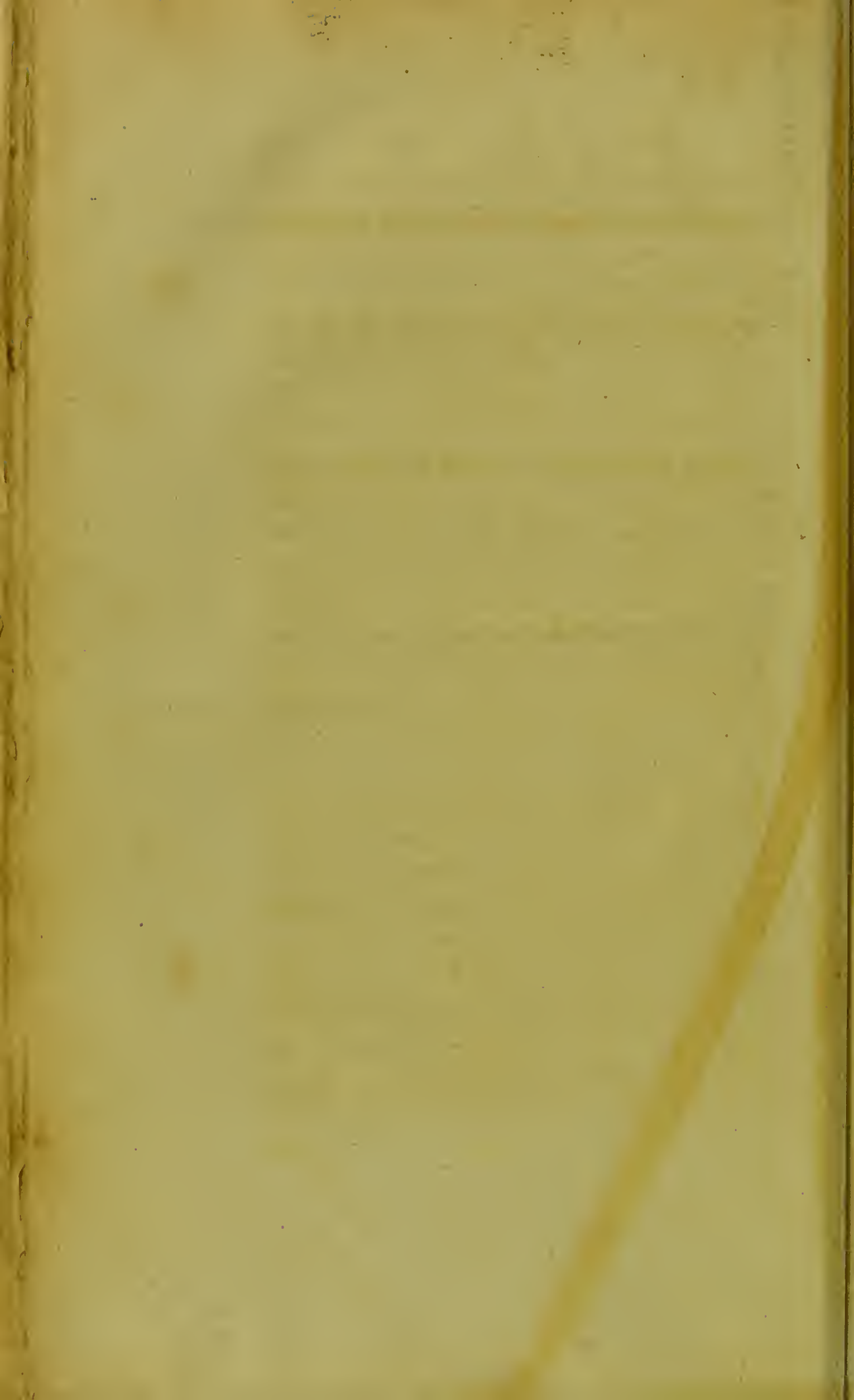


species. Bilious diseases, with obstinate visceral obstructions, are the effects of this climate, though we are compelled to acknowledge that the liberal mode of living so universally adopted here, is the secondary cause: and however much the exercise of riding (which every one partakes of) may tend to reduce the complaints, yet it is a certainty that temperance will often prevent those which medicines cannot remove. The soil is admirably well adapted to the climate, being of a loose sandy texture; it receives and imbibes a much greater quantity of water than it otherwise would do, by which means the powers of vegetation are remarkably invigorated, and capable of producing every thing in great abundance, either as necessaries or luxuries of life. Indeed, sterility in this place is a great stranger; and we have not the least doubt, that when the police do effectually drain the swamps and clear the woods, this residency will vie with the rest in salubrity and advantages to the honourable Company.

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The water in general use is light, pure, and tasteless, the best criteria of its goodness: neither have we observed any inconveniences arising to those, who from necessity or choice are obliged to drink water without the admixture of wine or spirits. This is a circumstance that very rarely occurs in India, but can be verified by a great variety of examples. From the observations already made, we shall (by taking a retrospective view of the whole, and by bringing them into one focus) relate the symptoms of the particular diseases alluded to, with the method of cure.



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# OBSERVATIONS

ON

## HEPATIC DISEASES.

### PART II.

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#### CHAP. I.

*General View of the bilious Fever, hepatic Flux, and Hepatitis.*

IN the first part of this work it has been shewn, by a short and succinct account of the climate, &c. of each settlement, that the diseases peculiar to them are similar in their fundamental origin; and, by a just comparison of the air, soil, and situation of the different presidencies, we do not find such an essential difference arise as is common to places describing similar parallels which are situ-

ated without the tropics ; but this cannot be a matter of surprize, as we are all conversant with the prevailing winds\* in these circles, which will fully clear up any difficulty of reasoning that may occur on this subject—consequently then (as appears by recitals) there is so great a similitude in the natural causes of climate and season, also in the disposing causes, exercise and diet, concurring with habits and constitutions particularly subjected to bilious complaints, which by repeated attacks are rendered more susceptible and irritable, the effects of medicine more wavering and precarious, the diagnostics varying, and the patient tired with struggling against disease. By this we shall readily perceive the great trouble that arises in executing the curative part of distempers. Men of strong rigid fibres, and valetudinarians are exceedingly liable in the hot dry months to severe bilious fevers ; the former are always exposed to the dangers of putridity, and suffer very much from the effects of the disease ; which too frequently terminates in visceral obstructions.

Those

\* Monsoons.



Those who are accustomed to indisposition, very rarely, on the first approach of their complaints, have any evident putrefactive symptoms; though sometimes the inflammation runs more high than we naturally expect from constitutions familiarized with disease, resolved and relaxed by being so long accustomed to heats and moisture. Now we observe, that if this inflammation in such reduced habits is not duly repulsed, in the last stage of the disease, the putrefaction will first attack the bowels and then become general; the patient, unable any longer to exist under such circumstances, will die. It may appear extraordinary, that men of strength and great vigour of constitution, unimpaired by sickness, should be so liable to the fatal effects of this disease. Certain it is, from whatever cause it may proceed, that the rapidity and strength of the distemper is always most violent in robust habits.

Females, children, and all those who are of a lax and delicate texture, are seldom harassed with the effects of bilious

fevers, neither are the symptoms in these sort of patients so inveterate or alarming. There is one circumstance claims our particular attention on this head, which is always more or less attendant on bilious attacks in the female subject. If the fever has made its approach on or near the time of the menstrual evacuations (which is the case four times out of five) and either suppresses or prolongs that discharge, the event is generally fatal, unless relieved by copious bleeding and feminine medicines. It is not adviseable to restrain the complaint too hastily, but if it becomes violent, which often happens to married women, then it claims our particular attention for relief; otherwise the patient will inevitably sink with debility, as in the other instance with a plethora. We have known two remarkable cases occur from the changes wrought in the human frame by this disease, viz. the one an elderly lady, who had, by the course of nature, not been subjected to the menses for many months: the other, a maiden lady, who had by a former illness been deprived of this evacuation,

cuation, and felt little or no inconvenience from the suppression, though during this interval of two years, she used herself to the lancet, three or four times in twelve months, more, we are induced to conjecture, from caprice than necessity, as she was remarkably healthy. In both these cases the discharge at first became very alarming, but after the fever took place and ran for two or three days very high, then the menses gradually ebbed away, the symptoms of the fever became moderate, and it terminated in a remittent, which was cured by small portions of the bark, with the addition of a little saffron. The former patient had not any more appearances of the like nature, and the latter continued to be very regular, though in small quantities.

From these remarks we are inclined to conjecture, that bleeding in the first part of the disease is absolutely requisite. If our practice was confined to females under such predicaments, we are confident it is always necessary; but with men, whose frame is more strong and active, and who,  
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by very essential differences in regimen, are more open to the septic tendency of this disease (unless under very particular symptoms) it is highly injudicious to make use of the lancet; for although the strong tense pulse with laborious breathing may indicate the necessity of this evacuation, and the patient feels himself more light and easy, his pulse more soft and open, yet, in a few hours, the symptoms will be more or equally violent, and the patient low, feeble, and exceedingly dejected, with rigors and an insupportable load in the præcordia, spasms in the muscular system, and total suppression of perspiration. The urine, which before bleeding, would be reddish and turbid, is now rendered in smaller quantities, crude and pale. Indeed the first object is to cleanse the abdominal viscera by laxative cooling clysters, and afterwards the stomach by a brisk emetic, which will generally operate both ways. Without this precaution we have frequently severe pains in the head and breast ensue, with great heat and tension of the abdomen; but where the emetic precedes the  
other



other operation, the determination is always more speedy and salutary. A frequent repetition of these methods is useful to clear the alimentary canals of putrid, indurated colluvies, which are always generating during the progress of this disease. Copious perspiration ought by every means to be promoted, and also the urinary discharge; but hot air, tepid draughts of diluting liquors, are highly destructive: on the contrary, the air of the room is to be reduced to a lower state of the thermometer than is usual at this season, and the patient exposed to it as much as he can possibly bear, until he complains of being chilled. Small and frequent draughts of subacid diluting drinks made very cold by the application of nitrous water, are not only very grateful to the sick, but productive of very salutary advantages. In the decline of the disease the patient is to be supported with light nutritive diet, and a little generous madeira, acidulated with the juice of fresh limes, or red port with water. Old hock, when not adulterated (as is so commonly practised) with sugar of lead, is

a pleasant and cooling drink: but as we have so many liquors equal, if not superior to it, surely it can never be adviseable to run the least risque of adding fatal dry cholics and paralytic attacks to the catalogue of diseases.

The particular indications which require bleeding are to be minutely attended to, and no time is to be lost in taking away a few ounces of blood, and repeating it as the necessity of the symptoms urges, always observing not to be too liberal at one time, with the evacuation, for fear of sinking your patient too low. A staring wildness of the eyes, with inflammation, an aptness to action, and inattention to the people about him, with low small pulse, and a heavy pain in the hepatic region, are the prognostics that require the lancet; and if by the first five or six ounces of blood drawn we do not find the pulse rise and more full, with a little decrease of the other symptoms, it will be adviseable to repeat it. Should the patient after the first bleeding become dormitive and stupid, by no means repeat  
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the operation, but have speedy recourse to the former methods, applying a large blister on the hepatic region, and continuing it until the comatose disposition wears off. In the decline of these complaints, if nausea takes place, with dizziness, a listlessness, and drowsiness, it generally terminates in the hepatitis: on the contrary, if griping, with alternate heats, chills, tension and pain in the sartorius and gastrocnemius muscles succeed, it is a certain presage of the bilious flux, which, as the hot season wears away, and the atmosphere begins to be moist and damp, with frequent showers, is seldom cured until the colder months have prevailed for some time.

Should the dry period be seasonable and healthy, and very few suffer by the intense heat, &c. yet, at the breaking up of the rains putrid bilious fevers and fluxes will be prevalent; and it is at this period also that the liver is so much affected, and breaks out in suppuration, or hepatic consumption—the most pitiable of all diseases that are inflicted on the human species.

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The flux which prevails at these times is dangerous and alarming, the evacuations being much too large for nature to support, without the effectual administration of medicine. The preluding symptoms of this species of bilious complaints are variable in different subjects ; and by being thoroughly acquainted with its different modes of attack, we shall not only have a much clearer view of the enemy, but be able to repulse him without any considerable loss of strength, &c. This disease, like the bilious fever, is most fatal to the robust and healthy ; if they are so fortunate as to recover, it will require much time and care to re-establish their constitutions ; indeed, so pernicious are the consequences, that many continue to have a weakness on them, and on the least irregularity are subject to slight attacks of the same disease, which, according to the length of time that the latent principles have been accumulating, or the quantity of excess committed, are short or long, mild or severe : but in those of weak and lax fibres, and of an irritable habit, the distemper is more lenient and



and less alarming, the symptoms not so complex and variable, and the first assault less oppressive and burthenfome. These patients have but a small degree of feverish heat attending on the complaint, the nausea not very irksome, the spasms remit and are not intolerable, the tongue not much crufted with whitish or yellowish buff, the breath not very fætid, yet the gripings in the first passages are continual and severe, the stools putrid and watry; it is feldom after the first or fecond motion that any knotted fæces are voided; and, in the fecond ftage, the stools are not excrementitious, but mere washings of the intestinal canals, mixed with greenish or yellowish bile. The prelude to death in the laft ftage of this complaint, is when the motions are black and very putrid, fometimes mixed with filaments from the internal coats of the bowels, the urining is excruciatingly painful, and of a very green and yellow hue, voided in fmall quantities, and not turbid. To this melancholy detail may be added the deleterious ftate of the patient's mind, with fingultus, and a low trembling

ling intermitting pulse, returning with feeble efforts to regain its velocity, then again with more enfeebled remissions, starting and struggling with the remaining sparks of vital flame, the patient suddenly feels himself relieved, becomes drowsy, and sinks under these various calamities into eternal slumber. Men of an athletic frame and rigid fibres have all this train of maladies to combat with, in a much greater degree; for (although it cannot be mathematically deduced, that the strength of the disease is par with the vigour of the afflicted) this is an observation of so long a date, and so universally acknowledged, that it would be presumption to controvert these sentiments, particularly when daily practice verifies the validity of this declaration.

The delirium or stupor, which is constant in the last termination of this disease in the delicate habit, is always a more early visitor in the robust, and requires plentiful blistering to remove it. The lancet we have withheld on these occasions, judging that it is the great stimulus  
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in the stomach and bowels which is the immediate cause of this symptom. Now, if after plentiful evacuants, there still remain these symptoms, then it is advisable to take away eight or nine ounces of blood, lest some hemorrhage should follow, and reduce the patient to the lowest ebb before we are aware of the consequences. Frequent lenient purgatives, assisted with calomel, soap, and rhubarb, are always serviceable, and promote the expulsion of putrid bile and fæces; but drastic purges, unless in very sluggish habits, are prejudicial and baneful, and ought always to be used with the greatest circumspection. Dry air and cloathing, with particular attention to cleanliness, are great restoratives in this disease, therefore all conveniences should have a portion of water in them to prevent the effluvia diffusing throughout the room, and should be well cleansed immediately, not being permitted to be left for further occasion. Without these very necessary precautions, the patient and every one else will be exceedingly incommoded, and made very liable to partake of the disease.

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The room should be kept cool and airy, frequently sprinkled with a little vinegar, or, what is better, a few branches of fresh limes may be hung up and removed every two or three days, as the exigencies of the case may require. As there is ever a great emptiness in the stomach and bowels, small draughts of congee or panada, with red wine and lime-juice to make it agreeable, may be frequently and safely used : during the indisposition not any animal food can be allowed ; turnip water, or, what is to be preferred, marmalade made by adding a sufficient quantity of rice flour to the soft pulp of boiled turnips, formed to a good consistency with the juice of this vegetable, is a most pleasing and nutritive diet, and never (excepting in cases of long inanition, or great stomachic feebleness) produces the least uneasiness or flatulency. In this instance the correctors are a little flour of mustard mixed with the whole, or a few cloves, which ever may be most agreeable. In the convalescent state, pish-pash and chicken gruel, with small draughts of feeble claret and water are to be had recourse



course to, observing to err rather on the abstemious side, than otherwise.

As the external air at these times always affects the patient's abdomen, and makes him chilly, with thrilling pains in the umbilical region, we direct a piece of flannel to be worn during the illness. This application, however trivial it may appear, is productive of the greatest benefits, by warming and invigorating the abdomen, which facilitates the peristaltic motion of the bowels, and brings on a gentle generous perspiration. As the complaints wear away, the flannel may be left off, and changed to callicoe, and that also gradually omitted.

After all the turbulent symptoms are removed, and the patient gathers flesh and strength, it will be necessary to make use of a sea bath, which will revive the spirits, brace and constrict the muscular system, and add firmness and elasticity to the different organs. The only care requisite is to avoid taking cold; and, if a costive habit succeeds, a little rhubarb and ipe-

cacuanha may be administered once or twice a-week.

We have had frequent opportunities of remarking the course of this bilious flux on board the honourable Company's ships, and also in those gentlemen in India, whose nautical employment keeps them much at sea. To those few who frequent the Malay coast, and reside long in their posts, these complaints are particularly prejudicial, and they always require a greater length of time to recruit their constitutions, and a frequent recourse to saponaceous and rhubarbaric laxatives, to check the progress of accumulating disease, and prevent those relapses which, without the greatest care and attention, will inevitably follow, and however light and well the patient may feel himself after these returns, yet they bring on such universal debility and relaxation, that the consequences are ever to be dreaded. Therefore it is adviseable, whenever a yellowish hue of the eyes, or slight twitches in the muscles of the legs, attended with vagrant pains in the bowels,

els, languor, &c. take place, to apply freely lenient and oleaginous laxatives, until the symptoms are gone away, and then endeavour to strengthen the stomach, &c. by cordial aromatics, and, if no feverish heat hangs about the habit, the bark with claret will be beneficial, sometimes adding a small quantity of fresh lime juice to make the draught more pleasant and fit easier on the stomach. It is worthy our very serious remarking, that the diseases infecting the Malay ports, viz. Rhio, Tringana, Selangoa, Quielah, do invariably in their effects destroy the stamina of the constitution; and there are but very few instances occurring to us, that can be held forth to controvert this opinion. The remnants of the disease infect the habit so long, that the cure will ever be very precarious, the symptoms assume a different face, and the seat of the complaint is not two days together invariably the same. This must be productive of perplexity to the physician, and great anxiety to the patient. The most successful mode that has hitherto been practised, is to remove the sick frequently

from place to place, always preferring a hilly situation as the most desirable. This change is to be promoted as soon as the patient can, without any risque, bear the fatigue of his journey. Nutritive, vegetable, and farinaceous diet, with a small portion of medicine, generally compleats the cure. This method of practice is very seldom so effectual to those gentlemen who are constant residents on the continent: on the contrary, we find that short sea voyages, and abstemious living on board of ship, does always answer our most sanguine expectations.

We have now given a general description of the bilious fever and flux; it remains that we describe the third species of bilious diseases, which sometimes originates from the former complaints being ill-cured; or by rapid progresses of slight indisposition, it at once fixes itself in the liver, harasses and tortures the lingering patient with the utmost extremity of pain. This complaint appears to be little known in practice in the northern parts of Europe; and before we proceed to the  
general



general view, we beg leave to insert the substance of Dr. Cullen's lecture on this subject, which, perhaps, may not be in every gentleman's possession. The elaborate lecture not only shews the extensiveness of his discernment, but reflects the highest encomiums on his learned abilities.

“ I have found it (says the Doctor) extremely difficult to form a character of this disease, such as would apply in all the variety of cases that may occur. Whenever the characters that I have laid down are all present, there will be no doubt relative to the disease; but it is only by taking them in combination; for, when taken separately, there is hardly any one strictly decisive and determinate. The first part of the character, after the pyrexia, I have termed *hypochondrii dextri tensio & dolor*. These are the most certain symptoms of hepatitis; but there is a fallacy here in two respects: the first is, that the liver extends so far into the hypochondrium, even into the left side, and if this portion happens to be affected, we may be mistaken, if we judge merely from  
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the seat, it being in the right side, we exclude the liver, and even the pain alone seated in the right hypochondrium will not be decisive:—it may either be an affection of the stomach, or of the colon, there contiguous to the liver. And we will not give a much more certain determination from considering the state of the pain, *sæpe pungens obtusus*. When the membrane of the peritoneum extended over the contiguous surface of the liver, is the part affected, it exactly resembles, in its appearances, the pleurisy, for it is ever attended with a difficulty of breathing and cough.

“ I knew a person who had, for several times, been treated for a pleurisy, and dying of another disease, upon opening the body no adhæSION in the pleura was found, but a portion of the liver was strongly attached to the peritoneum, and with the marks of former inflammation. You will see in writers, as in Sauvage, a *pleuritis hepatica et hepatitis pleuritica*. The distinction is of no great consequence, the practice being much the same; but it  
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may prove an inconvenient mistake with respect to the issue, which in the hepatic case is often by suppuration, and where this happens it may lead to a very different practice, if we do not distinguish the seat by the pain *sæpe pungens sæpe obtusus*.

“ As to the *dolor ad claviculum & sum-mumbrumeri dextri*, which has been considered as a pathognomic in the case of hepatitis, some have explained it by a connection of nerves that give occasion to this. If it were necessary, I could shew, that this is not applicable, and there is a much more simple explanation where the liver is inflamed in its convex part, and makes an accretion with the contiguous diaphragm, the weight of the liver pulling it down gives a pain that is only felt at the fixed extremities, at the clavicle or point of the shoulder, as Sauvage has explained. But 'tis not the pathognomic required: 'tis confined to the case of accretion of the diaphragm, and 'tis ambiguous in this respect, that it in some cases attends an inflamed mediastinum.

Another



Another mark of the hepatitis is the *decubitus in sinistrum latus difficilis*: this, however is not universal; it only happens in consequence of the accretion of the liver to the peritoneum of the right side, and when the bulk and weight are considerable, then the lying upon the other side gives pain and tears the parts; but where the weight is not considerably encreased, the *cubitus in sinistrum* may be sufficiently easy. The following symptoms, the *dyspnœa tussis sicca*, *vomitus*, *singultus*, are all characters that apply to the disease; but none of them apply separately: I have placed them here as modifying the different cases, and wherever our characters are otherwise less compleat, I think it of consequence to point it out. From the circumstances taken singly we cannot judge, but from them all taken together we may be somewhat secure: perhaps there will be in some cases doubts remaining that we have not been able to determine.

“ Having thus spoken of the means of determining the existence of this disease,



I must desire you to compare the characters I have given with those of Sauvage and Linnæus, and you may see what is especially to be attended to. Besides this character Vogel makes an addition: he sets down *icterus, interdum vomitus bilis & per alvum dejectio*. It has been very common in most practical writers, and it may be bold indeed to reject it as a symptom, (the *color faciei flavescens*). I say briefly, that it has proceeded upon this, that the hepatitis is very frequently symptomatic of a remittent fever; and we know that these, in warm climates, seldom take place without affecting the liver more or less. But it is not owing to that, but to another effect of the disease; if they induce a yellow colour of skin, it is not a symptom of hepatitis, but with this combination of remittent fever; and so it did not properly enter into the characters of the disease, it being the idiopathic that we are here characterizing; or, I believe, if it has been more universally alledged, it has been entirely from theory. So Boerhaave has given the *icterus* as a symptom; but Van Swieten himself has given

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up the point, and has added the reason why no icterus can appear from the irritation of those matters that are not changed into bile, and that it is only in consequence of re-absorption that icterus appears; and therefore it is not merely from obstructions of the extremities of the hepatic arteries that an icterus can arise, but from an obstruction of the vena portarum it cannot: and there are innumerable instances of the idiopathic hepatitis without any such symptom; and the only case that gives ambiguity is in the remittent fever, and there is not properly jaundice. However, we must add with Van Swieten, that there is a case of hepatitis, where if the inflammation of the liver is in its convex part, in that portion contiguous to the gall-bladder, there the inflammation may be communicated to the biliary ducts, or by its size may compress these ducts, and have the effects of a calculus, and produce the jaundice; but that is not properly to be considered as a symptom of the hepatitis. The other symptom that Van Swieten adds, is the vom. bilis: I will not deny that the  
irritation

irritation of the liver by inflammation may promote the secretion of bile ; but I find it very little taken notice of by practical writers, and it is by no means a necessary consequence, and both the *vom. et deject. bilis per album* are very rare, and of no use in the character.

“ Next to its theory, let me add a few words with a view to its distinction. Dr. Boerhaave gives a piece of theory, that the obstruction producing inflammation may occur in the extremities of the vena porta or arteria hepatica ; it is true the obstruction may occur in either, but the inflammation can only subsist in the extremities of the hepatic arteries. There are not the same doubts here as in the lungs, because the pulmonary artery has all the conditions and circumstances of an artery : but the vena porta has that single condition of the blood flowing from the larger trunks into smaller branches. But the coats of the vena porta have not been suspected to be muscular, so that there never is that increased impetus that constitutes inflammation.



mation. Obstructions that begin in the extremities of the ven. port. may be communicated to the hepatic artery, and may there produce inflammation; but the seat of inflammation must be in that only.

“ The hepatitis is distinguished into the phlegmonic and erysipelalous, and to the first species of Sauvage, the erysipelatissa; but it is a distinction that is not founded on fact, nor admissible in theory. I gave my reasons for this before. If we are right in our notions of erysipelas, that it is owing to an acrid matter deposited under the cuticle, there is nothing analogous to that in the ligaments of the liver, or in the secretion between that and the coats of the peritoneum; and there are no facts or observations that lead to ascertain this distinction. Another distinction has been into parenchymatous and membranous inflammations of the liver, but I say the last is the principal. There is certainly room here as well as in the lungs for supposing the two different cases; but, besides the difficulty I moved before, it is  
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here we have a proof of the argument I employed; I said, that where the parenchymatous inflammation neither seemed to have occurred, and upon dissection the abscess or collection of pus appeared in the substance of the liver; yet in ninety-nine cases of one hundred there were no previous marks of the inflammation. It has been a chronic case in consequence of some congestion, some effusion, which came to the neighbouring parts, attended with a purulency, and does not discover itself by the peculiar circumstances of inflammation; and therefore I would say that the parenchymatous inflammation of the liver is not in any case the object of our practice as a primary inflammation. I have only to repeat that the hepatitis, as in other cases of the visceral phlegmasiæ, may be either idiopathic or symptomatic; and, perhaps, the symptomatic in all cases is the most frequent, as a consequence of remittent fever. I have before explained why these intermittent and remittent fevers have such a remarkable tendency to produce accumulations and congestions in the abdominal viscera, and

and more especially in the liver and spleen, but do not enter into the consideration here; and indeed in this present case it is very rarely that those of the liver are to be treated as inflammatory diseases.

“ To conclude:—when, independent of remittent fever, the hepatitis appears as an idiopathic, the cure is the same as that of the other abdominal diseases, by bleeding, purging, bathing, blistering, &c. With respect to the symptomatic case, I have only to add, that, when remittent fever, is as a fever cured, or when its violence is at least considerably abated, nothing is more common than for a congestion, (and indeed many symptoms of an inflammatory state) to remain affecting the liver. We have lately learnt from the gentlemen practitioners in the East-Indies of what we would not otherwise have thought of, that the use of mercury in considerable quantities is the only effectual means of discussing the congestions that remain in the liver.”

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We now shall proceed to our general view of the hepatitis, without any comments on the former quotation, adhering strictly to the symptoms of this disease, and its various progresses, whether arising (as before taken notice of) from the effects of other disorders, or originating in latent and dormant symptoms, which have not much incommoded the patient, until the distemper being fully matured, breaks out in a most complicated and fatal manner. Peculiar to the disease is the method of cure; and whether it is created (which is often the case) by venereal taints, or the effects of a long course of mercury (resolving and destroying the stamina of the constitution) or from a combination of visceral complaints that have a natural tendency to form obstructions in this viscus, or by whatever cause created, the method of practice is very nearly the same: so that the young practitioner will not be obliged to seek for a remedy applicable to every symptom of the disease, which by their number and different positions, may induce him to form conjectures respecting the certainty

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of it, and lead him on to administer remedies that perhaps may palliate, but will never remove the complaint, which in the end does not only tend to aggravate the circumstances, by fixing more firmly those symptoms of the hepatitis, but reduces the afflicted patient to so low a state that the requisite remedies without the greatest precaution cannot be applied. To relieve him from these inconveniences, it does clearly appear that we should not lose any time in our application of effectual means, either previous to, or immediately after the general evacuations, as the exigencies of the case may require, always calling to our recollection that the more speedy the remedy, the more certain is the success. Indeed, with such habits of body as have fallen to our portion of practice, in the East-Indies (assisted to dissolution with the continual powers of a climate not adapted to European constitutions) we must be precipitate and determinate in our proceedings, otherwise the patient will fall. However extraordinary this mode of practice may appear, yet the success of the operation does fully  
evince



evinced the judiciousness of the proceeding: for without incurring the censure of vanity, we flatter ourselves we may indulge the epithet, when nineteen patients out of twenty recover. The effects of severe indispositions to which Europeans in the East-Indies are peculiarly liable, are too often productive of visceral obstructions, particularly in the liver; and as the patient in this case is consequently considerably reduced, we are to be cautious in the application of medicines, drawing a parallel between this situation and the other that was before related. A man in the full meridian of health, who has (without being able to assign any cause) a sudden attack of the disease, will require larger and more frequent evacuations, with a more liberal use of mercury, than the feeble and enervated, who are brought to a very low ebb of strength by other complaints, with this difference, that the latter do not require much bleeding, blistering, or purging, but an immediate mercurial course. On the other hand, the former will stand in need of all those remedies prior to the

use of that mineral, unless the pain in the hepatic region is very severe, with a small quick and tense pulse, slight hectic cough, with partial inflammation of one or both eyes, but generally confined to the right: in this case, saponaceous mercurial medicines are to be freely used, the lancet and other remedies restrained, until the symptoms abate. The reduced habit seldom has the complaints before recited, but a tense and rather full pulse, with vagrant pains in the right side of the thorax, extended to the clavicle, with quick respiration on the least exertion of the body, also dry parched hot skin, and various other complaints which will be related in the chapter treating of the diagnostics of this disease. Here the mercury may be safely and freely given in small quantities, rather as an alterative than otherwise, because in this case the event is more favourable, than procuring large drainings from the salivary glands; opium and camphor may be joined to abate the pain; which by lessening the stimulus, will oftentimes cause a perspiration to break out, and afford the patient amazing relief.

relief. The extremes of heat and cold are to be carefully avoided, and, if possible, the atmosphere of the room is to be kept to an equal standard: gentle exercises of reading, walking, &c. are amusing and beneficial. On no account suffer any errors of diet to be indulged, for the least excess in this point will create troubles and difficulties. Cooling light food, with frequent draughts of softening emollient liquors will allay thirst, blunt the acrimony of the contained fluids, and sheathe the viscera from the continual irritation. By guarding against these particular circumstances, we not only facilitate the cure, but assist nature in her endeavours to alleviate the severity of the symptoms. Females are not so subject to the hepatitis, and are ever easier relieved. Whether this arises from the delicacy of their formation, or from the increased menstrual evacuation, we have not yet been able to determine; but, from the remarks we have made in these cases, it very plainly appears, that the greater the flood of the catamenia, the more ease the patient experiences; and, on a

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diminution of this favourable discharge (although the lancet has been freely used) we never have perceived similar benefits arise. Now, if we have a patient in this particular situation, and can effect nature's general intention, we may not be the least apprehensive of the consequences, but go on with the course of medicine until the next flooding, which if natural, will do much, and make the cure very certain. In children, under puberty, this disease does seldom appear, and then not violent: the mode of cure is the same, excepting that it is not necessary to bleed; and if the appearances should induce the practitioner to apprehend a great state of inflammation, and in consequence he draws four, five, or six ounces of blood, it is very rarely that any good effect is produced, and we never have seen one instance of this kind where there was the least necessity for a second bleeding.

The hepatitis is not confined to any particular season or period; it is a disease that is peculiar to the East-Indies, for we have not learnt that any thing similar  
has



has yet made its appearance in the West-Indies, or in the southern British settlements in America. The Dutch gentlemen of the faculty, at the Cape of Good Hope, with those on the continent of Africa, have been silent on this subject; and although our settlements on the coast of Guinea, are much infested with severe and fatal bilious diseases, yet we have received no information concerning the existence of the hepatitis; and although this complaint is not confined to any limited time or season, it has never assumed an epidemical appearance, neither do we find the least inconvenience ever follows those who are attendant on the sick in any stage of the distemper, therefore we presume it is a complaint that does not carry any contagious principles with it, consequently the offices that are incumbent on those who are in alliance with the afflicted may be attended to with pleasure, and without the least apprehension of any pernicious effects arising from their compliance with the social duties.

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In the final stages of this disease, viz. schirrus or suppuration, the frequent changing of the air has most amazing and salutary effects, particularly if the patient can by any means take a voyage to the other presidencies, residing a short time at each, then proceed to China, and reap the advantage of the cold months, which will generally, with trifling medical assistance, remove the disease, and thoroughly reinstate the patient's health.

Two instances have occurred in the course of our practice, where the patient had suffered much by a severe course of corrosive sublimate, as they informed us, which, on the appearance of the hepatic symptoms was immediately discontinued, and the antiphlogistic method strictly followed with bleeding, bathing, &c. the symptoms still kept their ground, and could not be expelled either by medicine, regimen, or change of air. Thus these gentlemen lingered on eighteen or twenty months with a multitude of vagrant and most perplexing complaints, which rendered their lives a continual scene of unhappiness.

unhappiness. When application was made to us, their situation was truly deplorable; reduced by long indisposition and medicines, they were rendered mere skeletons, their countenances were cadaverous, their pulse small, tense, and frequent, severe cough, which often promoted vomiting, and without any expectoration, also acute pains under the cartilages of the ribs, oppressive and laborious respiration, especially when exposed to cold air, inflammations of the eyes, lax habit of body, and frequent attacks of the incubus. This is a dismal catalogue of complaints to be centered in one body, and it was a very clear position, that little could be expected from medicine. However, for the satisfaction of the afflicted, it became expedient to make use of some remedies, after enjoining obedience to diet, (which was entirely of the vegetable kind) and promising short rides in the morning, they were put under a course of physic, which, however simple it may appear, had the desired effect. This is all we seek for in medicine, or all that can be done by a more complex  
mode



mode of prescribing. We judged that this train of evils had originated from a course of mercurials (which ought never to be used in hot climates, for reasons every physical gentleman is well acquainted with) and that the immediate acting cause of irritations proceeded from the remains of this medicine lurking in their habit.

From these stated opinions we drew the method of cure by administering those remedies which have an immediate effect on the active powers of mercury, viz. by giving twice in a day one scruple of common flowers of sulphur mixed with a spoonful of honey. At first this prescription did not sit well on their stomachs, but brought off a quantity of frothy fluid, tinged with a yellowish hue, and caused violent gusts of foetid eructations; however, as there was no encrease of the complaints, the formula was continued, and in ten or twelve days a copious discharge from the intestines followed, which in a little more time moderated to almost the natural state; a general perspiration came on, and continued regularly during the cure, which



which was happily effected in ten weeks : the parties remain in health, though now they dare not take those liberties with their constitutions which they before accustomed themselves to. The first indication of benefit received by this application was the abating of the cough, which only became troublesome in a prone position, and now was attended with copious expectoration of green viscid pus. By this we were capable of drawing the prognostics, which were agreeable to the issue of the cases ; after this cough disappeared the pulse was more regular, though fuller, than in the natural state, the pains of the inferior portion of the thorax grew less, the urine became very turbid, and deposited a thick brown sediment, they slept sound, and their appetites grew very keen. The last remaining symptom was the inflammation in the eyes, which gradually wore away before the medicine was discontinued.

After all the symptoms had disappeared, bathing in the sea was recommended, which, by giving the muscles a quicker  
tension

tenfion and firmnefs, enabled them the fooner to recover their ftrength.

We have now remarked the general principles of the putrid bilious fever, hepatic dysentery, and hepatitis ; we fhall proceed next to defcribe the fymptoms of each particular difeafe, with their method of cure, in their proper order, as they are related in this chapter.

## C H A P. II.

*Of the Symptoms of the putrid bilious Fever.*

THE bilious remitting and intermitting fevers that are prevalent in the autumnal season are occasioned by the hot moist state of the atmosphere, which is always predominant at this period in the East-Indies, and by its duration or quantity of moisture, contributes more or less to produce these diseases. These are causes that ought to be well considered by every inhabitant, either as a preface to the certainty and fatality of the complaints, or as a precept to the means of prevention; for by guarding and fortifying ourselves against the inconveniencies of climate and season, we do not only mitigate the severity of disorders, but oftentimes prevent the attack.

The fevers that are consequent on this state of the air very frequently are epidemical, and similar to those bilious disorders

disorders that are companions of all low, flat, and marshy countries. The effects produced by these diseases being badly cured, or lurking long in the habit after the material symptoms are subdued, are always obstructions in the abdominal viscera, but most generally in the liver. Therefore, as these fevers have such affinity with those of other places, although in much higher latitudes, and the method of cure being the same, we shall not enter into a description of them, but refer our readers to that most just and elaborate treatise on diseases of the army, written by Sir John Pringle, where the symptoms are so accurately and minutely described, with the method of cure so judiciously laid down, that it is impossible to mistake the disease\*. But the putrid bilious fever of the

\* The puerperal fever, in the East-Indies, is always of the putrid sort, which is fully demonstrated by the very great fœtidness of the discharges, and also by the sudden debility and dejection which immediately follows; therefore there is not a moment to be lost. For in all putrid diseases, the more early the application, the greater probability of success.



the East-Indies being endemical, and materially different from the other remittent fevers, occasioned by the animal juices being in the most exalted state of putrefaction, and the solids unbraced, and universally relaxed, the fate of the patient is consequently suspended on a few hours, which, if properly employed, will generally lead to a favourable issue; but

Medicines of active qualities ought always to be administered; because in hot climates, particularly in continental settlements remote from the sea, putrescency advances very speedily to dissolution. Ipecacuanha quickened with tartar emetic, in the first stage of this disorder, is an excellent remedy. After the loathing and inclination to vomiting are abated, small doses of four or five grains of ipecacuanha must be administered every two hours: but if, as it sometimes occurs, that this disorder has a greater effect on the bowels than on the stomach, which occasions a severe and rapid diarrhæa, then it becomes expedient to use ipecacuanha with rhubarb, and small quantities of calomel, to deterge the intestines, and carry off the offending matter; when this is completed, the other mode is to be pursued. In this complaint I have not observed any medicine to be more effectual than repeated small doses of ipecacuanha, always ordering a plentiful quantity of nutritive and emollient drink, which will blunt the acrimony of the contained fluids, and sheath the alimentary canals from irritation.

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when any neglect has been committed by either of the parties the opportunity is seldom regained, and the event too often fatal. This state of the disease sometimes shews itself in the hot and dry months, but is generally confined to the caricular heats, or close of the rainy season, when the human body is more liable to indisposition, not only from relaxation, &c. but also from the checking of perspiration by the humidity of the atmosphere: therefore we cannot make use of too many precautions, to prevent this inconveniency, but should also use every means in our power, whenever any default has taken place, to promote this most salutary evacuation, which will essentially assist nature to throw off any offending morbid matter.

All ages, and both sexes are liable to this disorder, though the robust and the healthy always suffer more from the immediate consequences, and future effects of this complaint, than the delicate and infirm; and the issue is much oftener fatal in the former than in the latter case.

case. The diagnostics are the same; it is the goodness of the constitution that occasions a variation of the symptoms from high and strong to feeble and slow. The habit having received the principles of disease, which are now thoroughly matured, they burst out and afflict the patient in a most alarming and tormenting manner. The pulse is full hard and quick, frequently jumping and starting; then vibrating for a short period in its natural state, and again throbbing as before; the countenance is exceedingly flushed, and there is a remarkable floridness behind the ears, and along the course of the jugular arteries, sometimes extending to the posterior part of the neck and back, great and universal heat in the thorax and abdomen, involuntary urine, which is likewise blackish or of a very deep yellow, a coldness and paleness of the feet and legs, which does often reach to the hips, profuse bleeding from the nose, the head exceedingly hot and painful, particularly the forehead, the eyes watering, and lips convulsively trembling,

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the breathing laborious and very short, oppressive pain in the præcordia, the heart throbbing exceedingly hard against the ensiform cartilage, with constant deep fetched sighs, emission of white frothy fluid from the mouth, the breath very hot and offensive, spasms in the muscles, particularly in those of the hands and arms, the head drooping on the shoulders, with delirious ravings and inarticulate sounds; the skin is parched, and the patient refuses to drink or take any sort of fluid; large petechial spots now cover the surface of the body, and are particularly thick on the thorax. This is the favourable crisis; but, when no petechiæ make their appearance, and the ravings, with other symptoms are present, along with an involuntary expulsion of the fæces, the patient is not far from death. Now the scene is generally closed in twenty or thirty minutes, and nature gives up the contest. These are the symptoms which are the inseparable companions of the putrid bilious fever, and agreeable to the strength or feebleness of the patient, do  
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all present themselves in a few hours; or, by a slower progress, step on from symptom to symptom until the routine is performed, unless we can prevent it by a speedy and efficacious application of remedies.

## P R O G N O S T I C S II.

## C H A P. III.

**T**HIS disease has some particular symptoms that do indicate the approach of death, or determine the crisis to be favourable. When there are not any livid or inflammatory spots in the last stage of the disease, on the breast, arms, or abdomen, we may venture to pronounce that death will inevitably follow. Involuntary voiding of the fæces and urine, with profuse hemorrhage from the nose, are mortal symptoms; great restlessness, and struggling to get up and walk, with deleterious ravings, are very unfavourable. Partial perspiration with violent purging or vomiting, bring on instant death; continual coldness of the extremities, with inability to move them, is generally unfavourable. The reverse of these prognostics are preludes to a certain recovery, and the greater

greater the crop of petechiæ, the more confident we may be of the patient's doing well. Copious, universal perspiration, or the repeatedly voiding of great quantities of urine, are very beneficial circumstances to the patient. Many of these prognostics may be applicable to other contagious diseases, which by their duration or severity will occasion an equal degree of relaxation and putrefaction.

## C H A P. IV.

*The Method of Cure of the putrid bilious  
Fever.*

I N the cure of the bilious putrid fever, there are two distinctions to be observed, which are requisite for regulating the method of practice, viz. The first is, where the patient has been long lingering, and, having hopes of the complaints wearing off by abstemiousness or strength of constitution, has omitted applying for assistance, until the disorder is so far advanced that he cannot any longer support himself under it. In this case we observe the disease approach by all its separate gradations, until the symptoms are fixed, with a greater or less degree of putrefaction; hence it will follow, that the mode of practice must differ from that which becomes immediately necessary, when all the complicated diagnostics make their appearance in the course of a few hours. In the former case we have time to observe the  
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the various and frequent terminations of the disorder, and to adopt an application of remedies suitable to the progressive symptoms, which will enable us to form a more compact and distinct opinion of the nature of the distemper, and give us a desirable opportunity to encounter on equal terms with the disease; but, on the other hand, when the putrid bilious fever assumes the complicated form, and all the symptoms are presented in a short space of time, then not a moment can be spared to wait the issue of medicine or variation of symptoms. Now it becomes indispensibly requisite, as we value the life of the patient, to have instantaneous recourse to powerful remedies, which are to be plentifully thrown in. The disease in this elevated period will not admit of any parleying or delay; the position is a clear and fixed one, subdue it and the patient is saved. Every mitigated period is to be attentively watched, that we may not for a moment omit the administration of medicine, to assist nature in producing short and compleat remissions; when this is once effected, we have little to apprehend.

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But, if by any imprudent omission of embracing these critical opportunities, we suffer the disease to proceed on to the future more violent and encreased paroxysms, in all probability the like favourable crisis will not return; but nature in a little time will sink with the intensity of heat. From this we may readily and very clearly conceive how much care and attention is requisite from the physician, and how sedulously he ought to remark every period and variation to snatch the patient from the jaws of death.

These precepts being premised, we are to proceed in the first place by cleansing the intestinal canals with lenient emollient laxatives; on all occasions avoiding any of the drastic cathartics, which should never be used, unless in the decline of the disease, when there sometimes may be an uncommon sluggishness in the habit: then perhaps it will be adviseable [to make use of the milder alvetics, which by remaining long in the first passages will promote a more copious and salutary evacuation,

evacuation, than those medicines which by their greater activity so speedily operate. After the bowels have been cleansed, and the nausea or effort to vomit continues, ipecacuanha quickened with emetic tartar, should be taken, diluting the stomach plentifully during the operation. Although this complaint indicates a super-abundance of bile in the first passages, yet it does not always follow that any bilious vomiting is effected by the emetic. Indeed, when this complaint has increased, and repeated emetics have been taken, it generally falls out as before; therefore to save the patient a great deal of disagreeable trouble, if the first emetic does not answer the desired effect, by bringing off any bile, it will be more advantageous to desist from a repetition of this method, and endeavour to relieve nature by the other evacuations. For this purpose, there is not any thing more universally successful than small quantities of tartar emetic with nitre, made into draughts by the addition of some of the agreeable simple waters, which are to be repeated and

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continued until a copious perspiration breaks out, or the draughts, which is sometimes the case, pass off by the intestinal canals. Now it is to be observed, that if neither of these ends are answered, and nature still groans under the symptoms, small quantities of camphor are to be added, to lessen the irritation and check the stimulus; by doing of which we generally compleat our desires. The ardency of this symptom being reduced, oleaginous purges, composed of manna, sweet oil, and cinnamon water are to be further administered, in small quantities, until the bowels are thoroughly cleansed: but as many patients are exceedingly costive in the first attack of the disease, and the common method here will not produce any effect, we then give a bolus composed of five grains of calomel and half a drachm of rhubarb, which generally sits well on the stomach; and if the fæces are not considerably indurated, will in a little time procure one or two costive motions; some will have four or five stools, the latter ones fœtid and bilious; should this event not take place, and the  
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costiveness remain, we repeat the bolus as before, and assist the patient by a warm oleaginous clyster. Disagreeable as this practice is, we cannot always succeed without it; for when the anus has been long locked up, and the inferior bowels loaded with hard knotty excrement, it will require more time than can be now allowed to remove this obstacle. It will be in vain to attempt a total or compleat remission of the fever during the costive state, which feeds all the symptoms; therefore whenever this is the case, every means must be made use of to bring about the evacuation. When these methods have been plentifully used, and the pulse is not at all relieved, with continuance of the other symptoms, we may safely take away six or seven ounces of blood, observing to adjust the quantity either by the pulse, or the relief the patient experiences during the operation. For if the pulse do not rise on the first four or five ounces being drawn, and the pains become more acute, we are by all means to desist, and not venture to reduce the patient by too great a loss of the

the vital fluid. Now let us remark the case arising from this evacuation not answering our expectations, the pulse does not rise, neither are the pains relieved, yet the patient has some tendency to a general perspiration, which is often interrupted by a slight thrilling chilliness. When the other discharges have been procured, the next great object nature points out to us is, to promote a copious general diaphoresis. To answer this intention,—let it be remembered that hot stimulating remedies will not be beneficial; on the contrary, they not only encrease the torrid complaints, but plunge the patient into a variety of murmurings. Now the mild antimonials, with camphor and ipecacuanha, are to be given in small quantities and repeatedly; often assisting the afflicted with cool diluting draughts of barley-water, acidulated with lime-juice, or juice of oranges, citrons, &c. yet, notwithstanding, if the habit is so obdurate as to resist the effect of these applications, plunging the body into a tepid bath of water and vinegar will certainly bring on this critical discharge. Sickneſs  
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and inclination to faint may arise from the immersion, but this is not an object of any consideration; therefore we are not to attend to the entreaties of the patient, but persist in the application till we note the tendency to perspire: and although there may not be any visible perspiration on the body, or in the more common excretories, yet we shall clearly perceive the advantage the sick has received, by his spirits being raised, his breathing relieved, (being now free and open) his pulse full and soft, and in a little time a generous slumber succeeding. 'Tis now we may observe whether the habit has any tendency to perspire, if not, when the sleeping is over, the bathing must be repeated, continuing the medicines every half hour or hour. When the perspiration is not so diffusive as is necessary for the benefit of the patient, and the complaint of rigid respiration still exists, with periodical pains in the thorax and back, the pulse rather hard and tense, a large epispastic is to be applied either on the affected part, or between the shoulders: we prefer the former mode because it is not so very inconvenient

convenient to the patient, and consequently does not break in so much upon the short intervals of dosing, which, in this state of the disorder, are salutary and reviving. If the cantharides raise the impetus of the blood by their active stimulating powers, barley-water, with camphor and nitre is to be liberally drank, to sheath the animal fluids from this common consequence, and prevent any detention of urine. The ulcerations surrounding the abraded skin (although very troublesome) are amazingly serviceable, by draining the body of a great deal of acrimonious fluid, which would otherwise lie in the habit, and be a fresh exciting cause to the continuance of the symptoms. During all these processes the sick are not to be indulged with any animal broths or soups, for which they naturally have a great and continual craving. Should there be any necessity to comply with these importunities, a substitute of thin sago, or congee, with a small portion of generous madeira, may be allowed: but the acidulated drinks allay the insatiable thirst, and promote the diaphoresis, therefore



fore there cannot be any abuse or error committed, if the party complies with these rules. The blister may be kept open many days, or until the convalescent state, according as the necessity of the case may require. When the disorder is in its early period, these methods will bring on a compleat remission in eighteen or twenty hours; though very often there are slight intervals much earlier; but they are always of too short a duration to make use of; consequently when the disorder is not in the aggravated stage, it is not imprudent to wait for the compleat termination, by which means the patient's stomach will more easily bear the cortex, and can take a more frequent repetition than in those short intervals, where it frequently happens that the draughts are loathed, and cannot be retained on the stomach. When the cure is compleatly effected, the patient appears in a very favourable light, and thinks himself divested of all disease.

These are flattering hopes indeed, and ought not to be controverted; for the effects

effects produced in the human body by pleasing imaginations are always productive of good consequences, by adding a fresh stock of vigour to the debilitated mind, which enables the afflicted to bear the present evils, and fortifies them against the future consequences. Therefore we ought always to encourage these pleasing anticipated ideas, rather than to point out the state of the second attack following the remission. The instant we perceive the remission coming on it is the prelude to our certain advantages, an opening given us by nature to remove and eradicate the disorder: then we are to have recourse to the bark either in decoction, electuary, or draughts, adjusting the quantity to the strength of the patient's stomach, and repeating it by the same standard. Many throw off the bark on its first use, which must not deter us from the continuance, though it will be right to add a little port wine, or thebaic tincture, theriaca, &c. to prevent this disagreeable consequence, for if we cannot make the medicine stay with the patient, we are deprived of the advantage  
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consequent on the remission. Should this be the case, on return of the fever the solution of tartar emetic with nitre is to be more liberally drank, not attending to the degree of sickness or purging that may result from it; being well assured, if the patient is not considerably reduced that the effect does not arise from feebleness of the stomach, &c. but from an undue secretion of bile, which drains into the passages and stimulates the *primæ viæ*. Indeed this mode of practice seldom runs counter to our expectations. Now although the first remission has not produced any favourable turn to the patient, yet, by the ushering in of the second interval, we may plainly discover a great many circumstances that clearly point to a recovery. Brightness of the eyes, clearness of the countenance, great vivacity and cheerfulness, craving to eat, desiring to get up, which by every means should be encouraged, as well as the necessary duties of washing, shifting, &c. Cleanliness is a great promoter of health, and there is not any thing more refreshing to the sick than a punctual observation of

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these rules. We must here give the bark freely and often, notwithstanding it may be loathed a little, the patient must persevere, and drink now and then a small draught of red port, or claret and water. This point being gained, and the remissions fully compleated, the cure will be speedily effected, for whenever we can compel an acute or continuant fever to degenerate into a remittent, or any irregular form, the issue is generally certain and favourable. We now proceed to that state of the putrid bilious fever, which with all its combined powers invades our constitutions, and at once makes good its lodgment without any prior approaches. Such a very formidable and potent adversary, that it demands our strictest attention, for, unless vigorously attacked on all points, it will most certainly carry the fortrefs.

The patient is now brought into most imminent danger, not only by the acuteness of the disease, but by the little opportunity given to repulse and thwart the diagnostics, which are always very elevated



vated in this stage of the disorder, particularly, if before, the patient was robust and healthy. Then we cannot avoid commiserating with the afflicted, who, from a sound state of health, is at once reduced to all the calamities of a most severe disorder: yet such is the wisdom of the Omnipotent Being, that, by permitting the causes of good and evil to be mutually blended, we are taught that there is not any state of body, or sphere of life that is secure from the attacks of disease, nor any man, however wretched his situation, who may not draw portions of felicity from anticipating eternal happiness. The junction of symptoms being now formed, (which is verified by the innumerable complaints of the patient) we are to be observant of the distinguishing symptoms that require the lancet: when a staring wildness of the eyes, with redness, inattention to those about him, profuse hemorrhage from the nose, proneness to action, pulse low and feeble, pain in the hypogastric region, &c. independent of the other symptoms, a few ounces of blood may be safely taken

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away; yet, although the whole of these diagnostics are not recited, and some of them appear to be created by other symptoms, yet, when there is an inflammation of the eyes, and nasal hemorrhage, we need not be doubtful respecting phlebotomy; for the patient can well bear the loss of a few ounces of blood, and be benefited by the evacuation. Immediately after the operation, it is advisable to give a brisk cathartic compounded of senna, tartar emetic, and rhubarb, taken in small quantities, until several copious motions have been produced. If the medicine is not so active as expected in this situation of the patient, or should be thrown off the stomach, we directly apply the tobacco fumigation until the stools come away freely. A tube, made of reeds, bound with ribbon, which is used for smoking the hookah, and called a snake, is made use of on this occasion, to abate the heat of the smoke, which with the common apparatus frequently excoriates the anus, but by this addition the inconveniency is removed. This point being gained, the next great object is to lessen

fen the velocity of the blood, and to promote perfpiration. Whatever has a tendency to relax and soften the external component parts, bids fair for accomplishing this end. Bathing, as before directed, fumigations and fomentations of vinegar, very often compleat this business, when other methods have proved ineffectual. Frequent draughts of saline nitrous mixture, sometimes adding a small portion of tartar emetic, and giving the patient liberal draughts of lemonade, will generally promote the diaphoresis, or produce short exacerbations. In this interval a strong decoction of bark, with elixir of vitriol, is to be repeatedly given to check the septic tendency of the animal fluids, and procure a good remission. But in this ripe state of the disease, it is very seldom that the circumstances are so favourable; on the contrary, when the skin is closed, and will not emit any moisture, it is proper to make free with camphor, opium, cinnabar of antimony, or tartar emetic, (which is believed to be the best of all the antimonial preparations) made into small bolusses with any agreeable conserve, con-

tinuing the bathing with tepid vinegar, and satiating the patient's thirst with lemonade, and a small quantity of generous madeira to support the drooping spirits under this heavy burthen. By carefully watching the afflicted, and duly observing the state of the pulse, we may often note a debility and softness in its vibrations, which will not manifest itself sufficiently for us to fix the paroxysms; here the strength of the sick appears to be too far gone to compleat nature's intention; for it is not always mathematically certain, that the strength of the disorder is equal to the vigour of the patient, or that the remission keeps pace with the torrid paroxysms. Therefore when we have a disorder to encounter that deviates from general principles, we must compleat the deficiency by attention and applications, or strike the balance by removing the surplus. When the pulse indicate the impetus of the blood to be abated, we must not wait for further effects, but instantly embrace the favourable crisis, and administer the bark with red port, elixir of vitriol, or both, as the situation of the  
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sick réquires. Although there are not any instant proofs of an advantage resulting from this application, yet, if we have a few such chances, and apply the cortex liberally, nay, even after the pulse bespeaks the feverish exacerbation to be at hand, we may be confident of reaping great advantages from this mode of practice: but as it is often the case, that all our intentions are baffled by the strength and progress of the disease, and we cannot raise either a perspiration, or occasion an interval to take place, we then must rely on nature for the issue, supporting her plentifully with acid diluents and wine. Should the dyspnœa increase with periodical fœtid purgings and hemorrhage from the nose, we then may be certain that death will speedily follow. But if neither of these circumstances occur, and the patient lies stupid and dosing, we are to expect the appearances of the petechiæ upon the breast, &c. which eruption is always exceedingly beneficial, and instantly relieves him. Now we have not any thing to fear, and but little to do, except supporting the habit by strengthening it as much

as the situation of the case will admit. That will assist nature in this very salutary operation, which, when effected, will be followed at first by partial perspirations, and finally by very copious and general sweats. During the process, very small portions of tartar emetic should be administered, with saline draughts to promote the cuticular eruption, and thereby throw the morbid matter on the surface; when the petechial spots go off, and the pulse is open though low, the bark is to be freely used, in such a form as is most agreeable to the diseased, continuing the use of medicine, until the health is thoroughly established. When a costive habit of body comes on after the eruption, a gentle cathartic would be proper, and afterwards keep the body open, which can always be done by adding a little magnesia or soluble tartar to the bark. The great feebleness that succeeds this disorder, is remedied by cold bathing and nutritious diet, avoiding the extreme of repletion from eating too freely, by increasing the meals, and lessening the quantity, which will sit easy on the stomach,

stomach, and promote the desired effect. When the patient is sufficiently recovered to undergo some fatigue, short rides on horseback, in the cool of the morning and evening are recreative, and will considerably assist to restore the pristine vigour of the body: he may then venture to return to his former method of living, though it will be certainly prudent to guard against excesses of any sort, lest the body, by now being more irritable, should again relapse into the former disease.

During the whole course of this state of the putrid bilious fever, we cannot be too careful in preventing the effluvia from the sick being pernicious to those who, by affinity to the patient, are frequently visitors, or whose lot it is to attend on them; therefore the room should be kept as cool as possible, permitting the air to circulate freely through it; the bed cloathing is to be often changed, at least every morning, and the other conveniences are all to be well cleansed. In addition to all, fresh limes and fruit may be dispersed about the chamber, and removed every

every other day; vinegar is to be often sprinkled about the bed, and lavender or rose water may be thrown on the covering, by these means, if we do not deprive the effluvia of the infection, we at least reduce its malignity so much, that the attendants have very little to fear.



## C H A P. V.

*Of the Symptoms of the Hepatic Dysentery.*

THE bilious flux is often an effort of nature to remove and carry off the principles of other disorders; therefore, whenever we suspect that to be the case, it demands a more confined use of astringents, &c. for by preventing the course of the evacuation, we interrupt the intention of nature, and hazard the life of the patient. Now it is absolutely requisite to be well informed respecting his former state of health, whether he hath or hath not any good reason for ascribing the disorder to any particular cause. These circumstances being considered, the primary diagnostics are mostly a universal lassitude and dejection of spirits, heaviness of the eyes, with an inclination to sleep, nausea and flatulencies, which are often attended with efforts to vomit, the patient complains much of thirst, yet has not any craving to satisfy it, obstructed perspiration, and his pulse, during the gripings,  
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is small, tense, and feeble, but when free from this pain, it is rather full, hard, and quick; sometimes the patient in this state finds himself not very well, for a day or two before the other symptoms appear; should he then have assistance, the further progress of the distemper will probably be stopped. But this is seldom the case, because the patient does not judge himself sufficiently ill to require medical assistance; the disease then gathers strength, and creeps on to the more malignant and obstinate state. He then sees his error when it is too late to prevent the consequences: for the symptoms having lurked about the habit for some days, the flatulency increases, and occasions a great inflation of the abdomen, with severe and tormenting gripings, sometimes in the umbilical region, often in the left side, then wandering to the opposite, and down the back, until a great discharge of wind, or a motion is produced; short intervals of ease take place, then chilliness and rigors succeed, with the former symptoms alternately

nately attacking and moving about, until the same thing is again effected. The first stools are excrementitious and knotty, with straining and tenesmus, soon after they become frothy, fœtid, and bilious, and excoriate the labia of the anus, which is always a cause of increasing the symptoms by additional irritation. Hence the tenesmus is more vexatious, and the straining increasing, occasions an abrasion of the intestinal mucus, and an oozing of the serous humour; the stools are now watery and acrimonious, sometimes a little frothy, and often blended with yellow or green bilious fluid, the gripings more acute and fixed, and in the end an effusion of blood follows, with vomiting of frothy offensive chyloferous juice. The countenance now grows cadaverous, the patient is periodically delirious, the blood comes away involuntarily, the pulse sinks and intermits alternately, and in a few hours he dies. It generally happens in the hepatic flux, that the sanguinary discharge does not shew itself; this, we are induced to believe, depends  
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more on the state of the liver, than on any other cause ; for we observe, that whenever there is a great heat in the abdomen, especially in the hepatic region, with thick respiration and continual strangury, the evacuation is much earlier changed into the bloody sanies, than when these complaints are not felt by the patient, which fully bespeaks the great degree of inflammation presiding in the former instance ; the other case evinces the very acrimonious state of the bilious fluid, or, what is equally common, deep seated ulceration in the liver ; for it is very evident when there are not any external appearances to guide our examination and enquiries on this point, that we may be very confident of the real state of the viscera, by noting the stools, which, if not bloody, for the first five or six days of the disease, are seldom so afterwards, unless on the approach of dissolution ; when the violent aggravated symptoms have dilated the orifices of the sanguinary tubes. Indeed those stools are not to be deemed bloody that have filaments, or a small coagulum of blood floating in them,  
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for this may be the effect either of constant straining, or the pressure of indurated fæces in the rectum. We shall be the more justified in this opinion if the pain in the back is very acute and the heat about the anus and perineum very intense. Another circumstance presenting itself in this case is, that in every motion, the stools are not exactly similar. In the morning (if the patient has not been often disturbed in the night, which in the infancy of the disease is not always the case) they perhaps have bloody filaments, &c. mixed with them; the rest of the motions during the day will not produce any more instances. Another observation is, that the sanguinary stools in the early period of the disease are always very offensive and nauseous even to the patient; in the other state this is never the case, the stools smelling excremental rather than otherwise. The most plain indication that the seat of this state of the disease originates in the liver, is when the sick cannot bear much pressing on the epigastric region, without its creating instant gripings and pain: so that  
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when these cases occur in the comprehensive manner related, we cannot be at a loss for remedies. The pathognomic symptoms of each state being separated, the cure is rendered more easy; and if the disease is complicated, or appears without these apparent external causes in hot countries, and bilious habits, we have every reason in our favour for attributing the flux to the liver, particularly when we reflect, that by a number of our own dissections, as well as those of other medical gentlemen, we have not been able to discover any just grounds for altering our opinions. Now if the bowels were the sole and principal seat of the disease, it is a very evident position, that ulcerations would be found in the intestines, with many other marks that might lead us to investigate the source of the evil. But as in nine times of ten we observe, on opening the abdomen, that the liver or biliary bladder and ducts are diseased, and the other viscera sound, it can be no great presumption to declare, that, the source of the disorder.

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Men of strong vigorous habits, who are suddenly attacked with the hepatic dysentery, are most commonly afflicted with the inflammatory diagnostics, and on the contrary, the patients are most liable to those arising from a more mature state of disease in the liver.

## CHAP. VI.

## Of the PROGNOSTICS.

THE hepatic flux, like other bilious diseases, has some certain indications of the fatality of the event. The proofs are not numerous, but invariably the same. When the strangury is constant, with the intense heat of the perineum and hepatic region, and the patient has been often blooded, &c. without relief, it is a very unfavourable circumstance, and bespeaks speedy death; it is also equally certain when the emetics have not produced any effect. Hiccup, with apthæ and muscular spasms, dyspnoea, and involuntary emission of the urine are mortal symptoms; continual desire to go to stool, with an unmixed sanguinary discharge or evacuation of purulent pus, pulse sinking, and intermitting, are very clear preludes to eternity. The contrary of these prognostics are always favourable, and proclaim the patient's recovery.

CHAP.



## C H A P. VII.

*On the Method of curing the Hepatic  
Dysentery.*

T H E R E are two considerations before we proceed to the cure of this disorder. The first is, whether the patient was before healthy, and is suddenly attacked, having the apparent inflammatory diagnostics: the second to be acquainted with, is, whether there has been any previous indisposition, or the patient has been by any means enfeebled and reduced, or hath had any external symptoms. By attending to these circumstances, the method of cure will be better adjusted, and sooner compleated. Let us first view the case of the robust subject. Here, as we before observed, it is attended with a greater or less inflammatory disposition, consequently it is requisite to bleed according to the circumstances of the patient, or ardency of the inflammation, therefore previously to the administering

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of any medicines, six or eight ounces of blood are to be drawn away, and in an hour afterwards a brisk cooling cathartic of nitri sal polychryst. and rhubarb may be given. There is not any thing tends more to the cure than well-timed repeated purges; if the stools are very bilious and hot; a second dose is to be taken soon after the other has done operating. But we generally in this bilious state of the stools compound the second draught or bolus of rhubarb, calomel, and emetic tartar, which always most thoroughly cleanse the intestinal canals. If, after these methods the nausea is still troublesome, a brisk emetic of ipecacuanha and tartar emetic should be given to relieve nature agreeably to her own intentions; for whenever the bile has a greater inclination to pass by the mouth than otherwise, we ought by all means to assist it by repeated lenient emetics, which will very much facilitate the patient's recovery. Such large and frequent evacuations may appear to be bordering on extremes, but it is by this means only that we stand any chance of mitigating the symptoms; for the

the sick are not so much reduced by the effects of remedies as by the strength of the disease. On the other hand, distempers in hot countries are much more rapid and fatal than in high northern or southern latitudes, and from this consideration require more speedy and frequent applications. Indeed any omission on this side is always very unfavourable to the patient, and perplexing to the physician. These truths being so universally allowed, will be a sufficient apology for any deviation from the theory or practice of other medical gentlemen, residing in different climates; for the mode of cure must be comprehensively viewed and adapted to the nature of the complaint. If by these repeated evacuations the gripings continue ranging about the bowels, stimulating and promoting the intestinal discharge, we are to lull these tiresome symptoms by opiates and emollient diluents, which, by blunting the acrimony of the contained fluids, will in all probability, procure relief; but, as it too often happens in this state of universal relaxation and debility, that every sort of fluid



drank liberally, or sparingly, directly passes off by the anus, which not only increases the complaints of tenesmus and griping, but generates a very great quantity of flatus, filling the bowels, and rendering the patient very uneasy and disagreeable to himself. Now, if this happens to be the state of our patient, we assuredly will endeavour to prevent and remedy these inconveniencies, by bracing alexipharmics, which are always to be administered in substance, avoiding as much as possible any thin gruels, &c. Thick congee, or what is preferable, thick sago without sugar (though a little red port may be allowed with it) is to be sipped in small quantities, more as a nutritive kind of diet than as a diluent. If the opiates only procure temporary relief, we generally, after the effect of the dormitive potion is off, give a small quantity of manna with solution of gum arabic, and a little cordial water to check the astringency of that medicine. The griping and tenesmus are always the latter symptoms of the disease, and continue as long as there is any irritation in the habit, or  
increased



increased heat about the anus. Clysters of various sorts have been made use of to remedy those evils; but, if the griping is seated high in the abdomen they will have little or no effect, as not being able to reach the source of the complaint, consequently unable to redress it. We do not mean to infer from this, that clysters are to be abolished from practice; on the contrary, when the seat of the complaint is within reach of such methods, they are always productive of the most beneficial consequences, either by sheathing the bowels and obtunding the fluids, or by promoting the expulsion of the morbid fœces, &c. In the former instance, where the griping is seated high, there is not any thing affords more permanent relief than tobacco fumigations, which pass through all the convolutions of the bowels, and are tasted in the mouth. Another good consequence arising from this mode is, that they have not any additional quantity of air thrown into them, as is the case with a common syringe; add to which the soporiferous quality of tobacco in this form is ex-

ceedingly great, the patient instantly falling into a gentle generous slumber, which quells all his pain, and he is more considerably refreshed than by any opiates we can prescribe. Should the repetition of these methods prove ineffectual, and the diagnostics still keep their ground, we are not only to repeat the bleeding with a view to abate the inflammation, but apply tepid bathings on the abdomen, thighs, and feet; revulsions should likewise be made with large blisters, guarding against the stimulus of the cantharides, by giving camphor, opium, &c. It often happens that spacious blistering brings about very speedy changes, by diverting the causes of the irritation; for this reason the blisters are to be kept open as long as possible, and repeated agreeably to the exigencies of the case; barley water, with camphor and nitre, chalk, julip, with gum-arabic, nitre and camphor, may be drank to promote the discharge of urine. Promoting perspiration is now of the highest consequence to the patient, and may generally be effected by warm bathings, with repeated small doses  
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of camphor, tartar emetic, and opium, supporting the sick plentifully with light nutritive diet, and warm pleasing drinks. When the gripings abate, the tenesmus is more quiet, the stools decrease in number, and their consistency begins to alter from thin and watery to thick and excrementitious. In this case, the pulse should vibrate near the natural state, and if there are not evident proofs of inflammation straggling about the body, we may venture to compleat the cure with corroborating astringent remedies, strong decoction of bark, or the bark in substance, with addition of gum, myrrh, and small portions of opium. Camomile tea, for general use, may in this stage of the disorder be safely and efficaciously given, now and then throwing in a small dose of rhubarb, or some lenient laxative, to carry away any accumulated bilious fæces, which will perhaps sometimes be very slow in passing through the bowels.

But in the other stage of the disease (notwithstanding the methods before used, the



the disorder increafes, and the patient is very much alarmed, dreading the event, which appears to him inevitable) we are not to permit the follicitations of the patient to influence our method of proceeding, nor be under doubts becaufe we have been hitherto difappointed: on the contrary, the more formidable the difeafe, the greater fhare of credit we acquire by repulfing and fubduing it; and if finally, its powers are fuperior to ours, we have thefe few confolations remaining, to quiet the minds of the afflicted parent or diftrefsed orphan, that the paths to death are numerous and uncertain, and that diffolution is the lot of human nature, infeparable from our exiftence, and is the tribute to be paid by all; therefore as forrowing and grieving avail not to the dead, we fhould not add to the difagreeablenefs of our fituation by pre-judging any events, but make ufe of that philofophy which is diftributed in the minds of all reafonable beings, and which, if properly reflected on, is fufficient



cient to support us against all adversities.

The symptoms of the disease increasing, and the patient in consequence being considerably reduced, are very unpleasing reflections; however, there is not any time to be spared, but our utmost endeavours must be exerted. The griping and purging are equally severe, the stools are bloody and more numerous, the appetite almost lost, and the pulse low and very feeble. In this case clysters composed of the decoction of bark, with gum arabic and opium are to be freely used, to brace up the bowels and appease the irritation. Infusion of tamarinds, with rhubarb and emetic tartar, may be given every two or three hours, to carry off the putrid bilious fluid in the intestines, and also to promote a general diaphoresis. When the sanguinary evacuation is not very severe, although the tenesmus and griping are constantly harassing the sick, a tobacco fumigation with opium will procure long intervals of ease, but when it clearly appears to be occasioned by some lurking causes

causes in the rectum, the clysters are to be administered, varying the composition as the nature of the case indicates ; some will require emollient and deterging, others bracing and corroborating applications ; in fact, those that procure the most ease ought always to be preferred. If the infusion inclines the patient to vomit, an ipecacuanha emetic is to be taken, and then repeat the mixture. Pills composed of calomel, camphor, ipecacuanha, and opium, are amazingly efficacious : in this state of the disease, they promote perspiration and rest, and by deterging the bowels gradually, they will generally decrease the motions, and render them of a better consistency. These pills are to be taken one or two every hour, supporting the patient with red port and congee, or chicken broth, and now and then some red wine, as a cordial ; for the very low state of the patient stands in need of something more than common stops to strengthen and invigorate him. Indeed we have not observed any pernicious consequences arise from small quantities of solids ; and in the more advanced

vanced state, satisfying the patient's craving appetite, may be often attended with very good effects. Contradictory as this is to physical rules, yet, when nothing detrimental follows, but very often sudden and good changes are wrought, we surely are right in taking the most successful method for our guidance and direction. When the orifices of the minute blood vessels continue dilated with an incessant draining of the vital fluid from the anus, a clyster of alum, gum arabic, and sal martis, will often check the discharge, and in a small course of time restore the inferior bowels to their due tone, and when the heat circumscribing the hepatic region, is not increased, and the pulse does not rise to any degree of celerity, small draughts of the cortex in substance, with salt of steel and myrrh, will greatly assist nature to recover. These remedies can seldom be used until very plentiful evacuations have been administered, lest, by checking the disorder, worse consequences succeed. Hence we may conclude, that as long as there is much degree of irritation



tation in the habit, a free use of astringents will be prejudicial and dangerous; but if we can so reduce the stimulus, as to keep it either dormant or carry it off, then we may with safety prescribe those medicines. By these means the stools will become excrementitious, the straining and tenesmus will be periodical, and the griping will wander from place to place, similar to flatulent cholics; the appetite will recover, and a few days will complete our most sanguine expectations. When the irritation is not to be mitigated, but on the contrary increases with continual nausea, small tense pulse, and after the motions full and frequent, acute gripings in the umbilical region, and intense heat round the liver, with stools entirely blood, this case is too deplorable to admit of palliation, and the patient is sometimes delirious and flushed in the face, all at once his countenance becomes cadaverous, his pulse sinks, and he dies with the evacuation of blood. Two cases have occurred in our practice, where the patients on the first attack had the clear sanguinary discharge, and notwithstanding



withstanding every assistance was called in, and every method used that could be thought the least applicable to the disorder, they both died: the first, who was a strong and a remarkable healthy active man, lived only two days; the other, who was younger, though of a delicate frame, survived four days, they both perished in the action of voiding blood, and during the illness had very little fever. These cases we were at first inclined to think derived their origin from a rupture of some of the blood vessels, but observing the discolouration of the bodies which succeeded very early after death, and the very disagreeable flatus that issued from them by pressure, and the preceding diagnostics of the disease, being similar to those of the other stage of the disorder, it was reduced to a certainty that the distemper was the same, and that the inveteracy of it could only be attributed to a greater degree of putrefaction in these habits, accompanied by a very dissolved state of the blood, and a total relaxation of the solids. We shall have occasion hereafter to speak of these cases in the  
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dissections which will illustrate this latter opinion, by shewing as far as we are able to proceed, that the determination of ruptured vessels was too premature and inconclusive. We now arrive at the other stage of the bilious dysentery, which is not attended with the sanguinary discharge, and does not carry any very urgent tokens of inflammation along with it; on the contrary, it apparently arises from the very acrimonious and putrescent state of the bile, or from some defect in the liver or biliary ducts, which probably has been created by former inflammation or obstructions; and perhaps, both these causes may be the immediate exciting one. The cure, in this state of the patient, is generally effected, though oftentimes extremely difficult and tedious. Here the first and most material object is to cleanse thoroughly the intestines and first passages, which is to be effected by purges of rhubarb and mercury; afterwards, should the nausea and vomiting be troublesome, bark emetics are to be taken, which in this state of the disease, frequently bring off a quantity of bile,  
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and promote a gentle diaphoresis. When the emetic is sluggish, or does not perform its office sufficiently, it is adviseable not to repeat it, but rather to assist nature in her endeavours to carry away the disease by the intestines; for this purpose small doses of ipecacuanha, calomel, and Castile soap, are very efficacious, not only by facilitating the abdominal evacuations, but also by removing obstructions in the viscera, and increasing the natural perspiration, which is always most salutary when least occasioned by art. The first stools which are promoted by rhubarb, or neutral salts, are plentifully mixed with natural excrements; in this case the straining or griping will not be very acute. When the pulse indicates too much fever in the habit, with thirst and dryness of the skin, purgatives of salt and tartar emetic, or infusion of senna, with the antimonial preparations, are preferable; though it frequently happens, that the senna gripes the patient exceedingly, and in consequence thereof does not bestow so many favourable periods on the sick, or answer the expectations so well: for

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one of the principal observations in this case is to abate or lull the stimulus, that the afflicted may not be incessantly harassed with tenesmus, griping, &c. therefore, whenever from any cause this medicine affects the patient in such a manner, it is not proper to continue it, but recourse should be had to the salts or any other cooling cathartic. After these evacuations the patient will feel an amazing alteration; the pains considerably decreased; the nausea removed, with an additional flow of cheerfulness; and the pulse more free and open; it is necessary then to advance the cure by repeating the purgatives as the symptoms vary. When the gripings are long and very acute, instant relief may be had by giving the purgatives as before, or those other remedies, which by being retained for a greater length of time will generally procure more lasting benefit. When the patient is free from flatulency, and complains of coldness in the stomach and bowels, small quantities of camphor are to be added to the pills, and one or two taken every two or three hours.

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By these methods the chilliness and flatulencies will be corrected, and the stomach so much invigorated, that the complaints cannot generate so hastily. In three or four days the fæces are expelled without any excrement, being of a frothy bilious nature, sometimes blended with purulent, white, or greenish pus : these stools come away without any, or with very little griping, and they are often so quick, that the patient has not time to remove his cloathing, or strength enough to prevent the involuntary discharge. The evacuation is sometimes very foetid, accompanied with flatulents gusts, and at other times has scarcely any smell, that being rather stercoreous than otherwise; the urine is periodically hot, sometimes coming off freely, and at other times with difficulty. Here much depends on the degree of heat in the abdomen and perineum; for when these parts are nearly of the natural standard, such consequences do not ensue, and vice versa. In this debilitated state frequent purging is not serviceable, on the contrary, it rather encreases the feebleness by enlarging the

discharge. Hence it becomes requisite to use corroborating and strengthening applications, now and then administering a laxative to prevent the bowels from retaining any obnoxious fluids: nutritious cooling diet, with emollient ptisans, are to be liberally prescribed, and when the fever is not very great, which now seldom occurs, the patient may be indulged with a small quantity of wine as a cordial. This species of dysentery is very disagreeable to the patient, because the motions are so frequent, and do not give any warning. When there has not been any motion for four or five hours, the abdomen is exceedingly tight, very much tumified, and the respiration greatly impeded: a gentle purgative generally carries off these symptoms, which appear to be more the effect of a relaxed state of the bowels, than the result of generated air; for this kind of fulness is not attended with eructations, or any windy dispositions. Strong decoction of bark with myrrh and sal martis made in small draughts, should be next given repeatedly to restore the tone of the stomach  
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and bowels, and thereby remove the inconvenience: clysters of bark decoction, with gum arabic and alum, and if the irritation about the rectum is troublesome, opium may be added with a view of quelling the symptoms; but if the stimulating principles arise from excoriations, or too much sensibility in the bowels, created by the tediousness of the discharge, and attended with a procedentia ani (a circumstance that considerably increases the other symptoms, and is sometimes attended with inflammation) in this case oleaginous and emollient clysters are much preferable, because they alleviate the complaint and prevent a relapse. When these symptoms are appeased, the other clysters are very advantageously used, which, by their constringing, deterging qualities, materially facilitate the progress of the cure. The stools will now be less bilious and frothy, the appetite tolerably good, and the abdomen not susceptible of any pain by pressure, consequently the restoration method is to be advised and the patient assisted in the recovery by a proper regi-



gimen. During the convalescent state, small doses of ipecacuanha should be given each or every other day at going to rest, to promote the expulsion of the bilious fluid by the bowels; and it is also expedient to administer now and then, a gentle laxative to answer the same intention. When nature is sufficiently restored to strength and vigour, sea bathing may prevent the sudden relapses which sometimes are occasioned by indiscretion. And the patient cannot be too careful of himself after his recovery, gradually returning to his former way of living.

Hitherto we have described this disease in the favourable form consequent on this stage of it. We have further to remark, that when the methods before recited are not effectual, (the discharge increasing both in quantity and purulency, tearing down the constitution in a most precipitate manner) there is but little to be expected from medicine; but opium and calomel may be liberally given to cleanse the passages and procure ease. Diet of the  
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most nutritive fort, with emollient drinks, and wine, are to be freely allowed, otherwise the sick will soon perish by the evacuation, he now requiring an amazing quantity of sustenance to support him under such a profuse discharge. If the evacuation is violent for four or five days, and a cough comes on, or the bloody sanies appears in the stools, this being the exalted state of the hepatic flux, nature cannot long resist it ; the symptoms being so very violent, that if they do not considerably abate, he must certainly die.

## C H A P. VIII.

*On the Symptoms of the Hepatitis.*

**B**EFORE we proceed to treat of the symptoms, it will be necessary to say, that the diagnostics of this disease vary considerably in different constitutions, and in such a manner, that if we are not conversant with the previous symptoms we should not suspect them to be indications of one and the same disorder; which will not only lead the practitioner into an erroneous mode of practice, but deprive the patient of that effectual relief he naturally looks for from a course of medicine.

It is not only in the first attack of the disorder, that we are to form our opinion respecting the certainty of the complaint, but in the second stage also; for men who are in the zenith of health are more frequently affected with the diagnostics of the second state, than with the symptoms  
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of the prior; and although in the healthy, the modus of the disorder is the same; yet, according to the strength of the afflicted person we find the symptoms more or less violent. Thus, a robust, athletic man will have the symptoms in every stage of the disease much more violent on him, than a thin person, whose frame is more irritable. Those who are of a costive habit of body generally suffer very much by this complaint, and frequently, after the cure, are subjected to sanguinary drainings from the hemorrhoidal vessels.

Men who are reduced by diseases, or a whimsical application of medicines for imaginary evils, are always attacked by this disorder in a regular manner, and are generally relieved before the secondary or final effects take place; therefore to be well acquainted with the various approaches and progress of the complaint, it is necessary to distinguish the symptoms as they occur in an enervated habit; which may be divided into two classes, the first of which, attended with inflammation



mation and pain, is removed by evacuations and mercury; the second, that originates in obstructions of this viscus, with all its alarming symptoms, is cured by mercury only. Then we will remark the diagnostics peculiar to the healthy and vigorous, which may be also classed as the former, with this difference, that the second stage of the afflicted becomes the first in the healthy, and is cured by the like means: the second, or final period in the healthy patient, is suppuration or scirrhus; the method of cure the same.

The symptoms of the first state of the disease, in the reduced habit, consequent on medicine, or the effects of a bilious remitting fever, are a great flatulency in the stomach, with sour and foetid eructations; putrid and hot borborygmi; acute pains in the muscles, of the thighs and legs; drowsiness, particularly after taking any nourishment, with universal lassitude and inactivity; in the morning an inclination to vomit, and sometimes a little frothy bilious fluid is brought off; a severe periodical pain in the right lumbar region,



region, stretched along the spermatic chord, frequent desire of making water, which is always crude and pale. In those who have a small abdomen and large thorax, the pain of the loins does not follow, but a dull fixed pain under the ensiform cartilage, with tension of the recti muscles; frequent sneezing and a plenitude about the epigastric region, the pulse generally tense, small and rather full, sometimes rising to the natural state; the skin hot and dry, and the circle of the hepatic region remarkably heated. This is a tedious, but exact description of the patient's complaints in the early part of the disease, which, if properly attended to, may generally be prevented from running into the second stage. But if, from a particular idiosyncrasy of constitution, the disorder gets worse on the applications, the next effect will certainly follow, and is to be treated accordingly. This, although tedious and alarming, seldom or ever proves fatal, and is distinguished by the following symptoms; a rotundity of the hepatic region, with

with great pain under the false ribs, and the liver very sensible to the touch; a slight dry hectic cough; oppressive sighing, and great difficulty to read, or repeat long sentences; frequent periodical purgings, attended with griping in the umbilical region; depraved appetite; vagrant pains in the right side of the thorax; with laborious respiration, particularly when by accident a larger quantity of air than usual is received into the lungs; total inability of blowing the nose, followed by acute pains in the diaphragm and inferior part of the scapula; inflammation of the eyes; with small quick tense pulse; an universal parched dry skin; with insatiable thirst; a contraction of the right pectoral muscle, and an aptness to incline the body forward; tremor of the hands, and a remarkable pale whiteness of the nails; the urine voided in small quantities, and seldom, though always exceedingly high coloured and hot. These are the most material indications of a fixed hepatitis in the female habit, which, according to the age or strength of the patient, will be more moderated or encreased.

We

We now come to the other mode of the hepatitis acting immediately on the body of a healthy vigorous man (who, as we before observed, is unable to assign the cause of his indisposition) reducing him in a few days to the most feeble state. It has been before noticed, that the second stage of the valetudinarian is the first of the healthy; but we are likewise to remark, that the diagnostics of this period (in this case) are amazingly more acute and rapid than in the former; for in one day all this train of evils will be complained of, but in the other, the complicated symptoms move slowly: having therefore remarked the invariable rules, which nature, in this state of the disorder, points out for our instruction and the benefit of mankind, we shall not any more enlarge on this head, but advance to the final stage of the disease, by describing it as operating on the body of a healthy person. It is natural to conceive the state of that man who, from a full enjoyment of vigour and strength, is suddenly plunged into an abyss of misery and pain. Now attacked by one of the  
most



most potent enemies health has to cope with, which, without the greatest attention and care of both parties, will not be repulsed, but continue until it hath thwarted and overfet every means that can be made use of to prevent its progress, then the event becomes certain; nature unable any longer to protract the siege, having retreated to her last strong hold, yields up the disputed conquest, and sinks into eternal slumber. We beg leave to apologize for this metaphor, having been led into it through an idea of the great and constant apprehensions and anxieties, which patients labouring under this stage of the disease, always suffer.

The diagnostics of this state of the disorder are very violent and severe; grievous pains in the forehead; staring wildness of the eyes; exceeding acute fixed pain under the ribs, extended to the right pap; hard laborious cough; and by reclining the body forward, in the action of stooping, an immediate inclination to vomiting follows, with a stupid dizziness, and



and a reflection of green rays, but the patient on resuming an erect posture in a few minutes recovers his sight; the urine is rendered in small quantities, turbid, and of a saffron colour; the breathing short and oppressively heavy, with frequent singultus; and an universal parched heat over the body; total loss of appetite and perspiration; costive and insatiably thirsty; startings and twitchings of the muscular system; the countenance remarkably pale, with a blackness surrounding the mouth, and the eyes tinged with an inflammatory yellowness; the right side of the abdomen considerably enlarged, very dense and hard, and, if forcibly pressed, occasioning a pain in the scapula, and an instantaneous sickness, with coughing and sneezing; the pulse small, hard, and quick, frequently fluttering, and very often the vibrations are not to be distinctly felt, then instantly filling and rising to almost the natural state, and again returning and sinking as before; amazing periodical tremor of the hands, and in some plethoric thin habits the ancles are puffed and swelled; those that do not cough much,  
have

have always a great discharge of acrimonious fluid from the nose, with continual spitting, sometimes accompanied with large ulcerous blotches in the mouth and tonsils; in this mature state of the disorder, the patient can rest on either side, but not on his back without being immediately affected with incubus; but in the less advanced state of it; or after plentiful evacuations this is a common symptom, and is occasioned by the size and weight of the liver, which when lying on the left side, falls down from the diaphragm, and rends the adhæſion, or stretches the accreted part, either of which will occasion the symptom; but in the former case, the liver is so much increased in size, that there is not sufficient room in the abdomen for this accident to occur, which reasoning will also hold good before the adhesions have taken place, or before the bulk of the liver is considerable. The severity of the disease does not always depend upon the immediate size of the liver, but frequently on that of the gall bladder, or ducts, or the adhesions formed to the diaphragm, which is always the  
case

case when the upper or gibbous portion of the liver is the seat of the disease. When the symptoms are severe, without any apparent enlargement on the right side of the abdomen, with little tension and hardness, yet, on pressing the liver a sickness, cough, &c. are brought on, it is a certain and manifest testimony that the disease is situated about the region of the gall bladder, and that this bladder, with the biliary ducts are principally affected; but, when the liver is in the large state before related, it is the actual bulky substance of that viscus which is diseased. The pain in the scapula is also regulated by the foregoing circumstances. We have related, that it is in the very enlarged state of the liver that the suppuration succeeds with hepatic consumption; in the other case, deep seated obstructions, with scirrhus. Sometimes the abdomen is universally swelled, with pain in the umbilical region; this originates from the entire mass of liver being affected, and occupying a great portion of the left abdominal

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sphere. When the suppuration is matured, and breaks out with severe coughing and most copious spitting, the mercurial course will be exceedingly improper; the great object now, is to support the patient with nutritious food, and emollient ptisans. This is the first state of the hepatitis that does not admit of a cure by mercury; and it is a very happy and pleasing reflection to the afflicted, that in this dismal period of the disease, the surest means of recovery are vested in themselves; it being well worthy every man's attention, that medical assistance, on the first appearance of the disorder, will nine times in ten prevent the fatality of it.

The second state of the hepatitis, which does not require the application of mercury, is where the confined matter shews an inclination to point outwards, and is always discernible by the prominency of the integuments, which rise, when the suppuration is in the superior part of the liver, in a conical form; but, when the collec-  
tion



tion is lower down, and tends externally, the tumour is of a round flat shape; both may be easily distinguished by the great fluctuation in them, and their yielding so readily to gentle pressure, without creating pain.

## C H A P. IX.

## Of the PROGNOSTICS.

**M**EN of strong robust habits, who are attacked with the last stage of the disorder, are always in imminent danger. When the suppuration is fixed, and nature does not throw off the offending matter speedily; or, if the accumulation exceeds the evacuation, ulcers are formed on the diaphragm and lungs, and sometimes penetrate into the stomach, either of these cases is mortal: it is also fatal if the pus falls on the intestines, and is not expelled hastily, or if accompanied with blood. It is a bad sign in any stage of the disease, when emetics are administered and do not operate, continual stupor and inattention, are also among the alarming symptoms; but if the patient suddenly loses his inclination to drinking, and his pulse sinks and intermits, with oppression of the thorax, and sobbing, these

these are a prelude to certain and speedy death. But if the afflicted pump off the matter very fast, and partake of nourishment, it is very favourable. Large quantities of urine voided, either high-coloured or pale, partial slight perspiration, and a great desire to drink, are strong indications of speedy recovery; when the pulse become more full, soft, and equal; when the tremor of the hands is gone off, and the sleeping is not prolonged; and if a copious motion now and then is discharged, we need not be the least apprehensive of the termination: it is likewise favourable when the sick betray frequent inclinations to move about, and complain of chilliness, with emptiness in the stomach, and their sight is clear and distinct.

Having gone through the different stages of the disorder, as they appear to affect the human frame, with the symptoms consequent thereon, we flatter ourselves the young practitioner will be fully able to ascertain the existence and stage of the

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disease; whether it assumes a complicated aspect, or more favourably approaches by separate indications: we therefore proceed to the method of curing the different stages, as they progressively attack the valetudinarian or healthy,



## C H A P. X.

*On the Method of Cure.*

THE sympathetic case of the hepatitis, occasioned by any cause in the early or first period, attacking the convalescent or enfeebled habit, is to be cautiously treated; for the patient before having undergone and suffered so much from other disorders, or remedies, cannot now bear those repeated and plentiful evacuations, which the nature of the disorder apparently requires. Therefore, when the diagnostics run high, it will be prudent to take away five or six ounces of blood, and if the symptoms do not abate, in two or three days more, the operation may be repeated, but the quantity of blood drawn off should be less than before. Immediately after the first bleeding, a cooling purge of sal polychrist. or nitre, is to be administered and repeated as the costiveness of the habit indicates; the next morning an emetic, composed of

L 4            ipecacuanha,

ipecacuanha and tartar emetic should be given, for although the cathartic has done its office well, yet in a few hours there will be a great accumulation of bilious fluid either in the stomach or colon. If the emetic operates briskly, and frothy bilious mixture is thrown off, the patient will be considerably relieved; but if, as it sometimes happens, the emetic is tardy, and has not any effect, we are not by any means to prescribe a second, but assist nature in her endeavours, by promoting the intestinal discharge. The lassitude and feebleness that always accompany disease, seem to point out that evacuations will encrease the complaints, but practice convinces us to the contrary; having observed, that although the medicines in their celerity exceeded our intention, yet, after the process, their spirits and strength are very much augmented. These evacuations having abated the impetus of the animal fluids and occasioned short remissions of the symptoms, we instantly proceed to the mercurial application, composed of calomel, ipecacuanha, and soap; the mercury to be used as an alterative,

ative, and the quantity of ipecacuanha to be regulated by the condition of the patient's stomach: we cannot err with the soap. These pills are small, and to be given three or four times a day, one, two, or three at a dose. An electuary composed of bark, and flowers of camomile is to be taken twice a day to fortify the stomach and bowels against the irritation, occasioned by the acrimony of the fluids: if the pain and heat of the hepatic region continue the same, or in those who have a small abdomen, the pain under the ensiform cartilage does not wander, nor is removed, a large blister is to be applied, and continued open until the desired effect is produced. The immediate use of cantharides, before the other evacuations, is very seldom beneficial; on the contrary, blisters only encrease and prolong the irritation. During this course of medicine, the patient will every day find more ease, his rest becoming natural, his appetite tolerably good, and one or two motions a day will be the principal apparent operation of the medicines; but, after the symptoms are lessened, a general per-

perspiration will come on, with a plentiful discharge of urine, which in a few days will compleat the cure. In some singular constitutions, this small quantity of calomel will instantly affect the salivary glands, occasioning a plentiful spitting; in this case, the celerity of the mercury being too great to remedy the evil, we have experienced the good effect of discontinuing the pills until the spitting is gone off, making use of crude mercury instead of calomel, and giving an additional dose of the electuary to check the active powers of the mineral; for the longer it lies in the habit before the sensible operation takes place, the more advantage the sick will receive by the remedy.

In the second stage of the disease consequent on the former, or appearing as the first attack in a healthy man, the method of cure will be the same, unless, under some special restrictions, it will be necessary to use evacuants before alteratives or deobstruents. If, instead of the body being lax, and in the state we before described,



described, there is a great and long costiveness, partial head-achs and tormenting pain in the sagittal future, and the nose often dropping blood, plentiful evacuations should be effected for the robust, prior to the other applications: now if these symptoms are not present when the patient states his disorder, the deobstruent method is far preferable, until the symptoms are considerably abated; then, when the heat and pain, with rather a costive habit prevail, the evacuants are to be used alternately, as the case may require, always observing to decrease their quantity rather than otherwise; the great intention of such medicines being either to promote general perspiration, or expel the generated fœces. We now always make use of crude mercury and soap only; for the obstructions in this stage of the disease being always formed and fixed, will require a more liberal use of this medicine than before: the electuary is also continued for the same reasons as before-mentioned, varying the quantity of mercury and number of the pills according to the circumstances of the patient. If we find

find the pulse rise too high the cortex may be omitted for a day or two, and then repeated as before. In this period of the disorder we do not apprehend the inefficacy of salivation (unless too speedily brought on) but instead of checking it, we are to continue the remedies, supporting the patient with nutritive diet, until the process is sufficiently lengthened to effect the cure; which, though under these predicaments is very disagreeable, yet is always effectual. When the spitting is risen to its proper height, we are not suddenly to retract the powers of medicine, but omit them cautiously and gradually, proportioning the evacuation to the strength of the afflicted. When the hepatitis arises from remote causes, created by a remitting fever, or inactive visceral obstructions, and is attended with great relaxation and weakness; either a copious or mild salivation is not adviseable; yet the disease cannot be removed, or the obstructions resolved, without the assistance of mercury, but we must regulate the quantum of the mineral, so as to prevent this effect; sometimes

times enlivening the fluggish habit with small doses of camphor, and promoting the natural rest and perspiration, which is now much required, by a junction of the former with opium; mild lenient dormitives having an amazing efficacy, invigorating the patient, and thereby enabling nature to support herself under, and throw off the disease. Neither, in this last recited case, are we to omit the cortex, but continue its use agreeably to the former maxim.

In the last stage of the disease attending a vigorous constitution, where the obstructions are compleated, and the liver schirrous, or where the size of the liver is so very great that we have every thing to fear; a speedy recourse is to be had to the mercurial process, and where (which is sometimes the case) the medicine is very slow in its effect, we also make use of mercurial friction, with a view to bring on salivation. In this deplorable state of the sick, no time is to be lost, lest by delay it becomes too potent to be overcome; and severe as the disease now is, it is generally

nerally to be cured, if the medicines take the proper course, before the suppuration comes on. As the principal object is now to raise a free salivary discharge, the cortex is not to be administered, nor any other remedies, but the patient must be plentifully supplied with nutritive drinks, congee, thin sago, water gruel, or weak chicken broth, throughout the medicinal course. If there are not any natural symptoms of suppuration, such as coughing up thick purulent matter (which will not always be the case when the pus is not compleatly generated and matured) we are carefully to observe the abdomen, which if so as before described, we may be certain that the liver is not suppurated, and proceed to the cure accordingly: but if the tension and rotundity suddenly disappear, with flaccidity, and a sort of retraction when pressed, with slight or manifest fluctuation, we then may be very clear in our sentiments of the patient's situation, and endeavour to assist nature in this great operation to expel the morbid matter by expectoration, which is only to be done by emollient ptisans and light nutritive



nutritive diet. Medicine here is of no service; and tedious as the cure may be, yet, whilst the patient freely throws up the sanies, it is certain. When the discharge is by any means checked, we are to administer those medicines that have a particular tendency to promote and facilitate expectoration; and when the issue is thus favourably terminated, the discharge not being thrown off by coughing, nor the patient troubled with any exciting causes for that, we may venture to open the common channels of the body, and restore nature to her pristine state by well timed nourishing diet, moderate and gentle exercise, with now and then a softening laxative to remove any collections that may be tardy in expulsion.

In the second state of the hepatitis, where the administering of mercury is highly improper, we are to assist nature in her intentions as much as possible by facilitating the progress of the tumor; and as soon as it is sufficiently superficial that we can reach it by an incision (though rather deep) we ought always to give it  
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vent by keeping the wound open, placing the patient several times in the day on his knees and elbows, gently pressing the abdomen, and always, if possible, putting him in the most convenient attitude for draining the wound : by these means the matter will be brought to the opening, and discharged. If any of the pus lodges itself about the inner part of the incision, or on the surface of the liver, this will greatly assist the expulsion of it ; but if a quantity of pus does by any means intrude on the neighbouring parts, great pain and trouble will thereby be created ; for if the purulent matter is very acrimonious, it will corrode every part it fixes on, and speedily bring on mortification and death ; or when the matter is not of such a corrosive nature as to occasion this melancholy event, before it can be reabsorbed and effectually carried off, the patient must undergo great uneasiness, and the cure consequently will be very much retarded. In this state of the disease great respect is to be paid to diet, which must be regulated by the attending physician ; for all that can be now done  
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is to support the patient with nutritious food, and promote the discharge. Medicines are entirely unnecessary until the wound is almost or quite cicatrized, then all that is requisite will be a portion or two of cooling laxatives ; and those of an oleagenous nature are preferable.

Two of these cases have occurred in our practice. One, a young man, in whom the prominence placed itself on the lateral and inferior part of the ensiform cartilage, next the right epigastrium ; an incision was made, and the matter continued to flow plentifully for eight weeks afterwards, when the wound healed, and he has ever since enjoyed an uninterrupted good state of health. The other a married lady, mother of several children : the tumour pointed rather more naturally, and near the inferior edge of the true ribs ; the incision was made, and an amazing discharge followed, every thing went on well, and the wound was reduced to the size of an hazel nut, but never could be healed, always throwing

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out a greater or less quantity of matter according to the habit of body. When the discharge is trivial, she always is perplexed with severe bilious symptoms, which bring on a copious evacuation, and then she recovers for a short time. This lady has had several very fine children since this disease has been so fixed, and is in other respects perfectly regular. Finally, when sufficient strength is obtained, sea bathing and change of air, with frequent short rides on horseback are to be discretionally used. It being always adviseable to follow these methods with a view more speedily to reinstate the health. And such are the means we have universally practised with the greatest success, a success more than equal to our most sanguine expectations, or to the anticipated hopes of our suffering patients.

A great variety of opinions are established respecting the propriety of administering the cortex in any form, when there is an increased impetus of the blood, or when any obstructions are generated. This disease brings forward and supports  
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an exception to these : for certain it is (however much practice may deviate from theory) that here we have the most convincing proofs of its efficacy, being thoroughly confident that, without the assistance of this medicine, mercury would not be so effectual, or the cure so certain ; because when the bark is given in this manner, it effectually strengthens the stomach and bowels, constricts the relaxed vessels, which enables them to bear the power of mercury without incurring the risque of a greater feebleness, by which means the mineral will not only be prevented from running off by the salivary glands, but retained so long in the habit, that the obstructions will be resolved and removed.

We are the more fully convinced of the justness of this position, as it is not merely founded on our own practice, but raised on that permanent foundation which has been laid down by the most able \* practitioner in India, whose me-

\* Mr. Paisley, late surgeon at Madras, very famous for his judicious treatment of hepatic diseases.

thod was generally successful, and universally adopted by the gentlemen to whom he communicated his system. His death is a real loss to the profession, and will ever be regretted by all who had the pleasure of his acquaintance.

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# OBSERVATIONS

ON

HEPATIC DISEASES.

PART III.

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## CHAP. I.

*Observations on the Blood drawn from Patients, labouring under the Hepatitis.*

THE extraordinary appearances of the blood taken from people afflicted with the hepatitis, and the different alterations that fluid undergoes in a few hours, are circumstances that not only excite curiosity, but should be attentively observed; that we may investigate the cause of the disorder, and in some measure account for the analogy that exists be-

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tween this state of the blood, and that of venereal patients. The ingenious Mr. Hewson is of opinion, that by observations of this nature many new lights are thrown both upon physic and philosophy; as by these inferences other methods of cure are adopted, than those according to the present prevailing system, which appear contradictory and ridiculous. The variety of experiments and observations made by this learned and indefatigable gentleman to prove the accuracy and justness of his reasoning, have been universally received with the greatest applause, and are fully sufficient to stand the test of any scrutiny.

From the hints advanced by him, and the variable discolouration of the blood in the disease of the liver, we were induced to subjoin these few remarks; judging they may be of some future advantages to those gentlemen who are not conversant with the disease, and that they may be the means of ascertaining the reality of the patient's disorder, when



when other material symptoms may not be sufficient.

### EXPERIMENT I.

A seaman rather advanced in life, who had been ill of a bilious fever, was suddenly attacked with severe symptoms of a disorder in the liver. In the evening he complained very much, and as the symptoms were urgent, ten ounces of blood were instantly drawn away; the orifice being large, it flowed plentifully, and was with much difficulty stopped (owing as we conceived to the very dissolved state of it; this is a circumstance that very often occurs in scorbutic \* patients, and is not

\* Patients that are highly scorbutic, and in the last stages of the disease, have sometimes been bled to relieve the dyspnœa. In this dissolved state of the blood, it is frequently very difficult to stop the bleeding; for although always placed in a recumbent posture, and fainting is very common to them, we do not perceive it to have any effect in abating the evacuation. We have frequently been compelled to use a strict bandage, and keep a continual pressure on the orifice, until the intention was answered. Many who died of this disorder, and have been bled late in the disease, after their death, on the least motion of the arm, bleed amazingly free.

prevented by fainting :) the blood was exceedingly hot and black, the serum very red and glutinous, a thick substance of a green colour, interspersed with air bubbles, formed the superior surface of the crassamentum, the bottom adhered very much to the vessel that contained it, and was of a very loose broken composition; the thermometer was eighty-nine, and the blood separated in sixteen minutes. Six days afterwards he was again bled to ease a great difficulty of breathing, eight ounces were received into a china basin; it being quite calm, the thermometer was up to ninety-two degrees, the separation took place in fifteen minutes, and the whole quantity of serum was formed in twenty; the heat of the blood was scarcely felt on the arm, the coagulum was covered with a red film, and a great quantity of frothy red serum rested on this substance; the body of the cruor was very florid, and possessed of that adhesive quality which accompanied the first bleeding. After he had been under a long course of mercurials, and not any vestige of the disorder appeared, he was  
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put on a cooling nutritive diet ; during the convalescent state we took six ounces of blood from his arm, merely to observe whether any of the former appearances existed in those patients who have suffered so much by the disorder ; in this case we were agreeably disappointed, his blood being in as good a state as possible, excepting that the quantity of serum was not quite proportionable to the crassamentum : this man perfectly recovered, and during eleven months that he continued in the ship had not any more illness. From the state of his blood, which was so very similar to the fourth experiment, we were inclined to think that some venereal taint had affected his liver, and were not entirely convinced (notwithstanding his protestations) until other more certain signs occurred, which divested us of all prejudice respecting his veracity.

#### EXPERIMENT II.

A lad of fourteen years old, of athletic form, by plunging himself into a river, immediately after he had been at hard work,



work, contracted a severe cold. In three days he applied for relief, and from being a remarkable florid sprightly looking boy, he now was very pale, languid and thin. His principal complaints were a continual drowsiness, with acute fixed pain under the ensiform cartilage extending to the inferior ribs, a heavy oppressive breathing, with slight cough; urine very hot and seldom voided, universal tremblings, his body stooping forwards, skin parched and dry, with thirst not to be appeased. From these and other apparent symptoms we were certain of the disease being the idiopathic hepatitis. Accordingly twelve ounces of blood were taken away in two china basons, the orifice was made large and it flowed very freely; that which filled the last bason trickled down his arm scalding it to a very great degree; and all appeared black as it issued from the orifice. The basons were placed near the thermometer, which was at eighty-four and eighty-five all this day; and the first portion of blood seemed to congeal sooner than the other, but in viewing it as nicely as we could, without disturbing the whole,



whole, it was observed that this did not penetrate very deep; a small piece of gold coin (a pagoda) was gently laid upon the surface, and when the blood was removed, the metal was under the crassamentum; now, if the coagulation had been perfected, the coin would not have penetrated the surface, consequently it could not be said to be coagulated. In twenty minutes the blood of both basons was compleatly congealed, without any serum either oozing out, or appearing at the edges of the basons. In half an hour more we noticed the serum had separated, which was in a small quantity very red and glutinous; this was carefully poured off, and the basons placed in the same situation, to see whether more serum would issue from it: in another half hour the blood was in the state we left it, only the surface of the crassamentum covered with a green thick coat, adhering very firmly to the circle of the vessels. This being taken off, the under portion of crassamentum was very black, and of a loose broken texture. Four days after, it was judged necessary to bleed again, in consequence

of which ten ounces were drawn into two basons as before, the mercury being up to eighty-seven, it was placed in the same degree of heat, and the subsequent circumstances were observed; that the blood was not so black or hot as before, the serum in a smaller proportion and quite bloody, a great many air bubbles on the surface of the coagulum, under which was a tough film of a dark blue colour, the crassamentum not so black as the former, but its texture nearly the same. In these basons the separation was compleated four minutes earlier than in the first bleeding. The patient was then put under a mercurial course for near four weeks, during which time a slight inflammation attacked his eyes; he was again blooded to the quantity of six ounces, the thermometer being at eighty-five, the blood was perfectly separated in fifteen minutes. The surface of the crassamentum was now of a bright red, the serum rather white, and in a good quantity, the coagulum much more dense and firm, of its natural colour, and in six weeks he regained his former good state of health.

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## EXPERIMENT III.

A Gentoo female servant, ten years of age, had long been ill of a disorder called by the natives the bofs, (or spleen) this girl came under our care after she had, as was thought, been cured by the natives of the same disorder. On a strict examination, we found the ensiform cartilage drawn close to the right side of the ribs, the abdomen much enlarged, very tense and hard, the respiration difficult and oppressive, the pulse small and tense, the body costive, and in pressing the epigastric region an instantaneous sickness, with sneezing came on, bending the body forward, produced the same effect. This girl, although of such an age, had not yet been subjected to the periodical evacuations. From these symptoms we were inclined to think that this disorder was in the liver, and had every reason to conjecture, from the information we could get, that the former complaint was the same. Six ounces of blood were taken from her arm, and received into two tea cups; the mercury being at eighty-four; the blood was

was eighteen minutes in separating, twenty-five before any serum appeared, and ten minutes longer in compleating it; the appearances of these cups were exactly similar to those in the former experiment. During the cure she was again blooded, and the only difference between the blood now, and that of the second bleeding in the other patient (which merited observation) was, that there was a greater proportion of serum than is common. Before she was perfectly recovered, her menses broke out, and continued an unusual time; however, as she was not apparently enfeebled by this evacuation, the method of practice was continued, on which in fourteen days she perfectly recovered, and has ever since enjoyed good health.



## C H A P. II.

*Observations on the Blood of venereal Patients.*

## EXPERIMENT I.

A Robust, middle aged man, who had been the greatest part of his life at sea, complained of a heavy oppressive head-ach, and soreness of the throat, with difficulty of deglutition, yet there were not any signs of inflammation either about the tonsils or uvula ; ten ounces of blood were taken from his arm into two small basons, and placed near a thermometer, which then stood at ninety degrees; we observed, during the bleeding, that the blood was remarkably hot and black, the former quality he complained of, by remarking, when it trickled down his arm (which was not till very late in the evacuation) that it scalded his skin. The first bason stood twenty minutes before any coagulum was formed, and fifty minutes before it separated any quantity of serum.

serum. The second bason deposited the crassamentum in the same time, but the serum of the latter oozed out and became general in forty-five minutes. Both these portions of blood had a very thick coat of a greenish hue, extended over the surface of the cruor, and adhered very firmly to the basons; the serum was rather of a red colour and very glutinous; this substance being removed from the coagulum, it was remarked to be of a loose broken texture, and very black. The symptoms being relieved, no medicines were given, and the following day he was tolerably well; on the third day he again complained of the symptoms, and more particularly of his head; his pulse was now hard and very full, in consequence of which six ounces more of blood were taken away, but the heat of it did not affect his arm, neither had it that black appearance when issuing from the orifice; the thermometer being at eighty-six, the heat was adjusted to the first by the assistance of hot water. This blood was in a very different state from the former, the serum being quite bloody, and  
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in a very small quantity; the surface of the crassamentum was filled with air bubbles, which being pricked, discovered a thin tough substance of a dark bluish colour; the crassamentum was not so black as the former, but of the same texture. In six days from the first bleeding, this man came again to the medicine chest, with a variety of complaints, very different from any of the former he had made, and which at once bespoke the disease to be inveterately venereal, altho' he declared he had not had connection with any woman for five weeks before. A mercurial course was immediately made use of, and in three months he was perfectly recovered. During the illness it was expedient to bleed him twice; in the first of these bleedings, the blood had not any of the former appearances, the serum was in larger quantities, and of a white colour, the upper part of the crassamentum of a bright red, the residue of the cruor nearly in the natural state; the other quantity which was drawn late in the cure (excepting being a good deal

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broken down) had not any of the other morbid appearances.

#### EXPERIMENT II.

A young man, aged eighteen years, of a delicate frame, who had been at sea two years, complained of a gonorrhœa, which he had contracted twelve or fourteen days. The inflammation threatening the affected parts very much, it was deemed prudent to take away eight ounces of blood: as it trickled down the arm, he observed the heat was disagreeable to him. This basin was placed near the thermometer, which then stood at eighty-one degrees. The crassamentum was fifteen minutes in forming, and three more before completed; the serum was in a small quantity, of a red colour; the external coagulum was of a fine cinnabar colour, the residue black and very adhesive. During the cure, which was very much protracted by the intense heat of the season, and the continual inflammation fixed in the parts, it was deemed requisite to repeat the former evacuation; accordingly eight ounces of blood were drawn from his arm, which



which flowed freely from the orifice, and without any complaint of its heat. The thermometer stood at ninety degrees, and in twenty minutes the blood was completely separated, which did not shew any morbid appearances; soon after this second bleeding, the inflammatory symptoms disappeared, and in a few weeks his health was perfectly restored.

## EXPERIMENT III.

An infant of nine months old, at the breast, had been infected by the nurse with an inveterate venereal complaint, which terminated in death. Four ounces of blood were drawn, which was very much dissolved; the crassamentum formed in ten minutes, and deposited an extraordinary dark coloured substance on the bottom of the cup; the serum did not separate until four minutes after, when the texture was thin, ropy, and very red; the upper part of the gluten was studded with a number of blue pelli-  
cles containing air, the under substance tough and adhesive; the air at this time was cool, seventy-eight degrees being the

greatest height of the thermometer in this day. In consequence of this, the nurse (a Gentoo) was next day blooded, who apparently was healthy, being lusty and active, only her eyes looked heavy and sleepy, or there were no signs of disease; the blood was entirely the same as in Experiment I. and she lived only three months after the child, though there were never any venereal symptoms on her.

We have observed, in bleeding a number of patients in Bengal, during the rainy season, and at the approach of the colder months, when the humidity of the air is very great, that the blood is always of a florid red colour; this we conceive arises from the atmosphere being at this time so much impregnated with nitre, and may be the effect of the air on the lungs, being so long accustomed to inhale such vapours. We are induced to form this opinion, because in the other months in this climate, we have never noted the same appearances.

A great variety of observations of the same nature have been made on venereal and hepatic patients, but as the result of them all is the same, with very little deviation, a more tedious account would only be tiring our readers, without affording them any more convincing proofs of the analogy. Therefore we shall only observe, that there is a great and exact affinity between these diseases in the vital fluid, and that the method of curing them is nearly the same, consequently we may venture to draw some parallel between the venereal virus (when acting in its complicated form on the human body) and the exalted and very acrimonious state of the bile and animal fluids, in the advanced state of the hepatitis. These are queries which open a very extensive field for reasoning; and as all new hypothesis are attended with imminent peril of incurring censure, it is most prudent to leave this matter to be discussed by those who are possessed with abilities more equal to the task, and whose practice and knowledge of these diseases are more extended and familiarized.

## DISSECTIONS.

## CHAP. I.

*Of Patients who died of the Hepatitis.*

## CASE I.

IT has been remarked, in the observations on the hepatitis and hepatic flux, that there were some just grounds for attributing the dysentery to the liver; and also that the unsound state of that viscus, in those who died of the disorder, would fully illustrate the nature of it, by shewing us directly the seat of the complaint. From nine dissections of those who died of the liver, and seven of those who died of the hepatic flux, we have selected three of each, which we flatter ourselves will sufficiently evince the existence of those diseases to be agreeable to the remarks hitherto related Case I. in the latitude of 14 south, and two degrees east of London, in April 1774, being surgeon of the York East-



East-Indiaman, one of the Hon. Company's recruits was taken ill early in the morning. About nine o'clock he was lying on the outer range of the cable near the main hatchway, with his stomach pressing on it; his eyes were amazingly inflamed, and a great discharge of frothy saliva issued involuntarily from his mouth, the heat of his skin exceeded any we had ever before felt; his pulse was very small and quick, sometimes intermitting, his face very florid, and his neck remarkably red; he was slightly delirious, and all the information we could get from him was, that he had for two or three days been very costive, and his appetite had left him; that this morning he was seized (when endeavouring to rise) with a fainting fit; that his belly was very much swelled, and that he thought he had the dropsey; his breathing was exceedingly difficult and short, and he had a continual racking pain at the pit of his stomach. We were much surprized to see him so suddenly and violently attacked; for the day before he was on deck with the other recruits, and did not ap-

pear ill. We had then been seventeen weeks at sea, during which time this man had never complained, but was remarked for being a very healthy and active fellow; many of his mess-mates were then down with the scurvy, and the ship's company were also very unhealthy. On examining the body, we perceived his abdomen very much enlarged, exceedingly hard and tense; pressing it forcibly with both hands, occasioned a hiccup and sneezing, so that we were in no doubt respecting the certainty of the disorder, accordingly twelve ounces of blood were immediately taken away; a bolus, composed of six grains of calomel and half a drachm of rhubarb, was next administered, and an oily clyster was injected to cool the bowels and soften the fæces, (this he could not retain) drinking as often as possible a decoction of tamarinds and fenna, to a pint of which, adding three grains of emetic tartar. At eleven o'clock he was in the same state, again twelve ounces of blood were drawn, and the same medicines given, with the addition of flannel dipped in hot vinegar, and ap-

applied over the abdomen. At one o'clock the symptoms were more violent, with singultus and subfultus tendinum, his pulse small and very quick; on which we took six ounces of blood from his other arm and repeated the medicines. We saw him again at two o'clock, when he had taken twelve grains of calomel, one drachm and a half of rhubarb, and had drank three pints of the decoction, which contained seven grains of emetic tartar. Notwithstanding these applications, no evacuations of any sort could be procured; on which two ounces of castor oil were given him directly, and the same quantity repeated in half an hour, but all these medicines had not any effect, for he died at three o'clock, apparently without pain. This is a very extraordinary case; and to those gentlemen who have not seen this disorder, it will, no doubt, appear that a great quantity of medicine was thrown into the stomach: this is most readily admitted; but the life of the patient rested entirely on copious evacuations, for, could the passages have been opened, there is not the least doubt but  
this



this man would have lived a considerable time.

He was instantly taken on deck, and we proceeded to inspect the body; we chose rather to open the thorax first, not only to view the state of the lungs, but to observe the flexure of the diaphragm. The left lobe of the lungs was in its natural state, and perfectly sound; the right lobe did not appear diseased, although the inferior part of it was entirely collapsed by the pressure of the diaphragm, which had protruded very much into this cavity. We cut into the abdomen, and observed the stomach had not any thing in it, except about three pints of decoction, which had been drank during the illness. The duodenum was collapsed at its origin (from the pylorus) which extended below the orifice of the ductus communis cholidochus; the other bowels appeared in their natural state, except a quantity of air (more than is usually found in the generality of subjects) which was pent up in the colon; the bladder contained about a pint of  
very



very yellow urine, the spleen did not appear to have undergone any change, the gall bladder had a small quantity of blackish green fluid contained in it, the cystic and hepatic ducts were empty, the ductus communis cholidochus contained a little deep yellow fluid, which could not be pressed into the duodenum, therefore we concluded that the orifice of this duct was contracted in the same manner as the upper portion of the duodenum. The portion of the liver which circumscribes the gall bladder was of a remarkable yellow hue, but as we could not discern any rupture of the biliary ducts or bladder, we were at a loss to account for this appearance. The liver was the object which principally engaged our attention; the large lobe was of a dark black colour, the other portion of a very dusky red: the size was so amazingly great, that it occupied the greatest part of the abdomen, from this we were induced carefully to take it out and weigh it by a steel-yard. The weight of it was twelve pounds and an half; having cut into the substance of it, there was not any cyst, pus, or other matter

matter in any part. From thence we may conclude, that the inflammatory disposition of the bowel, must have been very great, and, that if the patient had survived a suppuration would have been the consequence, which from the very large state of the liver, would most probably have terminated in death.

## CASE II.

A Company's soldier, who had been under the care of Mr. Veetch, surgeon at Fort Marlbro, for a liver complaint, of which he was much better, by an unlucky blow from his drunken comrade was instantly killed, and being called in to inspect the body (relative to the cause of his death) we observed the following circumstances; that the stomach and bowels were in their natural state, the spleen weighed eighteen ounces, and was very turgid, the right lobe of the lungs much diseased, and adhered to the pleura, the gall bladder full of bilious fluid and considerably enlarged, the biliary ducts in their natural state, the superior part of the liver adhered very firmly to the diaphragm,

phragm, which was very spongy and flaccid; the liver of a dark red colour, and weighed seven pounds, in the substance of this bowel, there were many cysts filled with yellow pus. This man had been under a course of medicine near six weeks before his death, and was judged to be recovering; how far the possibility may be admitted of this man's existing with his viscera in this state, we shall not pretend to determine; certain it is, that he, from a very enfeebled state, was now able to take some exercise, and his appetite was tolerably good. We have many \*instan-

\* A very remarkable instance of this kind has lately occurred in a quadruped, perfectly healthy, and the flesh very good. The liver of this animal was very small, and full of cysts and yellow pus, the right lobe of the lungs entirely collapsed, and must have been long useless. Between the lower ribs and liver we took an encysted tumour of the steatomous kind, which weighed four pounds, of a very round shape; one side of it adhered to the inferior ribs, and the neck which was a small protuberance, was tied to the diaphragm with two strong filamentous ligaments. A singular circumstance is, that this tumour had not any vessels to nourish it, neither was it any where perforated to admit the egress or circulation of its contents, the ligaments not apparently having any cavity in them.



ces in quadrupeds that have been deemed very good food, whose livers were in a similar state, which is vulgarly called stony, yet these animals (to all appearance) have been perfectly healthy.

### CASE III.

A seaman, twenty-five years of age, who had been very ill with a bilious remitting fever, before he was thoroughly recovered was attacked with the severe symptoms of a liver complaint; his abdomen was very much enlarged with acute pain in the thorax, the ensiform cartilage was drawn close to the edge of the ribs, which occasioned great pain, particularly in respiration; his habit of body costive, and his pulse small, hard, and frequent. In this state he lived six weeks, being some days much better, and at other times exceedingly dejected and low. A few days before his death he was seized with violent horrors and tremors, which never left him, an involuntary evacuation of fœces followed with singultus, and in two hours after he expired without any acute pains.

Having



Having removed the body to a convenient place we proceeded to open it, beginning the examination by inspecting the thorax. The right lobe of the lungs was collapsed, and adhered to the inferior part of the pleura, and also laterally to that membrane; the inferior portion of this lobe was much ulcerated, and the bronchia stuffed with a glutinous yellow fluid, some of which had passed to the superior part of the larynx; the left lobe of the lungs was very much inflamed, and rather larger than is usually observed, this perhaps might be occasioned by the other lobe being unfit for its office, consequently then a larger and more copious inspiration would pass into the left lobe, and by long continuance create this preternatural appearance: neither will it be extraordinary, if we consider the elastic powers of the air bladders, which are capable at all times of containing more air than is generally taken in, in the act of respiration; the diaphragm was in its natural position; the heart appeared rather larger than usual, which we attributed to a greater quantity of fluid than  
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is customary being lodged in the pericardium. We cut into the abdomen and found the bowels entirely perfect; the stomach and bladder were empty; but on the anterior surface of the stomach there seemed to have been some traces of former inflammation, this part looking of a dull red, similar to what we observe in long continued inflammations of the eyes; the pancreas was of its common form and size, the spleen large and very turgid; the omentum in a very decayed state; and that part of the peritoneum which envelops the liver appeared much inflamed, and so very tender that it was difficult to handle it; the right kidney was of a much larger size than common, but its ureter proportional, yet we did not observe any defect in the other, nor did this appear the least diseased. We next examined the liver, which was of a black colour and very firm, the upper and gibbous part adhering strictly to the diaphragm, and created a discolouration of that muscle, which seemed to be in an inflamed state; this portion of the liver was of a spongy, loose texture, and seperated in  
many

many parts when gently pressed; the ligamentum teres was remarkably short, and at its insertion into the small fissure of the lower edge of the liver it was thick and large, which might be occasioned by the contracted state of the ligament; the ligamentum suspensorium had not (that we could perceive) undergone any change, though we expected to have found it lengthened in the same proportion as the other ligament had been shortened. The gall bladder was full of green bile, though not increased in size; the biliary ducts seemed to be more full and extended than is natural, and the orifice of the ductus communis cholodochus was spacious and much relaxed; in this duct were three small hardened substances, of an irregular form, and of a deep yellow colour, which cut like softened wax, but as we were not able clearly to ascertain what they were, we have declined enlarging on this head, as every physical reader may dissent in opinion from our conjectures.

## C H A P. II.

*Dissections of Patients who died of the  
Hepatic Dysentery.*

## CASE I.

WE have before briefly considered two cases of the bilious dysentery, which were attended with an immediate issue of blood; as these cases are nearly alike, and the result of the dissections the same, we for brevity shall only relate the history of the first, which was the most speedy and inveterate; afterwards two other dissections will be described, with a view to justify and corroborate the opinion we have entertained respecting the seat of the disease being in the liver. A young and remarkable healthy man, of a florid complexion and robust habit, who had been two years at sea, used a great deal of exercise, and was singularly noted by all the officers in the ship for his activity and industry, was unfortunately taken ill with a most excruciating



cruciating pain in the stomach; he instantly applied for relief, and said his spirits were very much dejected, and that he was certain he could not live long; we endeavoured, as much as possible, to appease these imaginations, as it too often happens that mental anxieties, particularly when received and fixed in bigotted dispositions, are very detrimental to the afflicted, and by that means retard the patient's recovery; therefore, as he was so much depressed, we not only made use of our own persuasions to enliven him, but also continually kept one or two of his mess-mates with him, to amuse and divert his attention. The pain in his stomach was so exceedingly acute, that he was almost bent double; his pulse quick and very small; his countenance more florid than ever we observed it (even after laborious employment); his hands trembled so much, that he could not carry any thing in a shallow vessel, to his mouth, without spilling the greatest part of it; his eyes appeared very dull, and tinged with a thick dusky inflammation; his head ached very much, though not

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continually ; but he had no inclination to drink, nor any sickness or griping in the stomach ; and the preceding day had two copious motions, which he observed were very hot, but this day neither voided any water, nor perspired. We carefully examined his abdomen, and could only discover a tightness and stricture in the right epigastric region, but from the position of his body, we were not able to satisfy ourselves in the examination, for the only thing that merited our attention was, that in forcibly pressing the posterior part of the right lumbar region, he shrunk from the pressure, although he did not complain of any particular acute pain thereabouts. These are all the circumstances we could collect from the patient, or from our own observations ; accordingly twelve ounces of blood were drawn from his arm, and a mixture composed of two ounces of manna, and four ounces of olive oil, with a little oil of peppermint (to make it palatable) was made up, half of this was given directly, and as it continued well on his stomach, the residue was repeated in an hour after ; but nothing

thing was effected by these means, so that at four o'clock eight ounces of blood more were drawn away, and thirty drops of thebaic tincture with mint water administered; two hours afterwards the pain was decreasing, though he could not raise his body; another opiate of twenty drops was taken, judging that if the pain could be abated, gentle laxatives would remove the complaint. One circumstance now attracted our attention, his countenance, from being as before remarkably florid, became pale and yellow, and his eyes very clear, so that his fate appeared to be at a very critical point, and we were much alarmed by such a sudden change: a fomentation of vinegar was applied to his abdomen, a large blister laid over the scrobiculus cordis, and a camphorated julep, with a small portion of antimonial wine (ten drops to a dose) was administered every half hour. At seven o'clock we were sent for, and he informed us that he had just evacuated a very plentiful stool, and thought himself rather more free from pain, but most miserably unhappy and disquieted. His



bed was laid on a large chest, as much in the air as possible, without being in the current of it; when, after staying with him about ten minutes, he again made use of the bucket, but the discharge was so intolerably fœtid, that there was no possibility of standing to leeward of the conveniency: even the men on the other side complained, and went on deck to avoid the offensive smell. We requested the people in the adjacent messes to move farther off, and also those to leeward to get out of the immediate drift of the effluvia, lest the putrid effect of it might create an universal sickness. The deck, beams, and carlings around him were all repeatedly washed with vinegar, besides which, a tea-kettle filled with the same liquor was kept continually boiling near his bed, that the steam issuing from the spout might counteract the putrescency of the stools; the bucket was half filled with water, and, to make it more commodious, the gun was run in and moved out of the way, that the vessel might be instantly emptied, which was left hanging in the water, keeping two buckets in use: by  
this



this method we avoided the offensive smell from the dirty vessel, which was always well cleaned before it was wanted; and it is certain that it prevented the evil consequences which were to be apprehended from a patient so dangerously ill. We looked at this motion, and did not see any excrement, or any thing of a stercorous nature; the water being very red, convinced us the evacuation was pure blood. To be more certain, a pewter basin was suspended on the water in the bucket, and the next motion proved our suspicions to be well grounded; ten ounces of blood were drawn away, and the opiate with elixir of vitriol repeated; but as we afterwards observed that the opiate had no effect, it was discontinued, and the vitriol given with strong decoction of bark. Early the next morning, we noticed that the blister had not penetrated; his pulse was low and intermitted; the pain in his stomach was entirely gone; his eyes were sunk; and his aspect pronounced his dissolution to be near; bark clysters with alum were thrown up, the relaxation being too great for him to

retain them. Thus this poor fellow continued until four o'clock the ensuing day, when a slight raving came on, a small interval of ease succeeded, he was placed on the bucket, and expired without a sigh. The different stages were so very rapid that they admitted of no palliation, and the event so suddenly fatal, that we were under the greatest apprehensions lest the disease should resume an epidemical form, and be attended with fatal consequences, but, happily, this did not occur. It is certain, however, that in this stage of the dysentery little is to be expected from medicine. The other case, which soon followed (where every assistance of the faculty on board of other ships, and on shore, were called in to relieve the patient from the impending danger) too clearly demonstrated the authority of this declaration. There is one great consolation, however, that this disorder but seldom shews itself in such a manner, these two cases being all that we have met with in fourteen years practice; nor have we heard of many from the gentlemen of the profession. The body  
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was soon after removed on deck, and on the abdomen being opened, the stomach was found to contain a small quantity of air, with a very little fluid of a brown colour, which we concluded was tea mixed with some of the bark; the duodenum jejunum and ileum were quite empty; the colon appeared a little contracted in that portion which passes under the liver; the cœcum and rectum externally appeared in their natural state; we slit the whole of the intestinal tubes, expecting to discover some traces of disease, but there were not any that could be fairly said to prove the truth of such a supposition, for all that could be observed was an abrasion of the inferior part of the rectum near the anus, which part of the bowel was more soft and flaccid than natural; the offensive mucus that lined the rectum was carefully washed off, but we could not then see any marks of inflammation; the portion of the colon under the liver was somewhat discoloured; the duodenum, where it is perforated with the biliary duct, was tinged with a greenish hue; the spleen and pancreas

creas were natural; the liver was remarkably small and hard, being of a very dark colour, the inner texture exceedingly firm and compact; the ligamentum suspensorium was of an unusual length; the gall bladder contained a small quantity of very viscid livid fluid; the ductus communis cholidochus was filled with concreted bile; the other biliary tubes the same as usual; the kidneys were not the least diseased; and the bladder contained near a pint of saffron coloured urine.

#### CASE II.

A seaman of forty years of age, who had been long ill with a bilious remitting fever, from which he had not recovered, being in a low and very feeble state, by exposing himself too early, contracted a severe cold, which brought on an acute fixed pain under the ensiform cartilage, sometimes extending backward to the spine; his eyes were dull and tinged with a yellow hue; his urine exceedingly hot and scalding; in the morning, (immediately on rising) a strenuous inclination to vomit



vomit came on, though unable to throw any thing off his stomach. The second day after the attack he applied for relief; accordingly his body was carefully examined, but no visible alteration could be felt or perceived, so that a gentle emetic of ipecacuanha only was administered, facilitating the operation by drinking plentifully of camomile tea; this medicine produced no sensible effect. In three hours afterwards, a laxative, composed of senna and manna, was given; this produced three or four copious motions, and in the evening he was much better; an opiate therefore was given to prevent any relapse. The following day he appeared considerably easier, and did not take any medicines; but the next, which was the fourth of his illness, he complained of having been very much purged all night, yet had not any pains about him, except a very cold sensation about the stomach; his pulse small and rather hard: a purgative, composed of rhubarb and calomel, was now instantly given, supporting him with wine, &c. this had the desired effect, although the purging was not in the least abated,

abated, his stools being yellow and green, of a gelatinous substance, without any excrement; in this state he continued, some days better and others worse, for nearly three weeks, during which time there were not any portions or streaks of blood mixed with the discharge. Now the symptoms increased very rapidly, the stools were more frequent, and less of the purulent sort, his urine high coloured, though not hot; the pulse soft and quick, frequently intermitting, then rising and throbbing hard; his countenance cadaverous; the abdomen much enlarged, and yet very soft to the touch, sometimes, particularly towards evening, being of its natural size: in this state he existed three days longer, when a delirium came on, and he died in the action of voiding his fœces. In less than an hour after death his body was much discoloured, though not in the least offensive; we carefully washed it with vinegar, and having placed it in a convenient situation for inspection, we proceeded to open the abdomen prior to the inspection of the thorax, which in the other dissections had been examined first;

first; the peritoneum was found to be considerably inflamed, and particularly so near the small lobe of the liver, which anteriorly adhered very firmly to it. This portion of that viscus was of a white colour, soft and spongy; the liver was not at all enlarged, nor had the other external surface of it undergone any change. We carefully turned it upwards to examine the concave part and gall bladder; this side of the bowel was of a much darker colour than natural, and exceedingly flabby, the gall bladder entirely empty, and its outer muscular coat much more thick and firm than ever we recollect to have seen any; the surrounding part of the liver was of a green aspect, and remarkably flaccid, with many hydatids irregularly interspersed here; the cystic duct, and also the ductus communis cholodochus were furcharged with a very viscid bilious substance; the hepatic duct much contracted and hardened, so that we were of opinion that this passage had been long obstructed, and had not admitted any channel for the bile. By cutting into the substance of the liver,  
near



near the origin of this tube, we discovered many cysts of yellow pus, which were in a very fluid state, the residue of this bowel appeared sound; the stomach contained a small quantity of very thin fluid, of a white colour; the duodenum was much coloured with a yellow crust, which adhered very firmly to its inner coat. About the orifice of the ductus communis cholidochus, which was considerably extended, there was a small collection of very thin offensive bilious fluid: the other small bowels, and also the colon and cæcum were in a perfect state. The rectum was cut longitudinally; here we could not observe any defect, excepting within about half an inch of the anus, where appeared an inflammatory discolouration, and the bowel was more soft than in a healthy state, which circumstance is often occasioned by a procidentia ani, or tenesmus. The kidneys were found, and as we usually observe them; the bladder quite empty; the spleen and pancreas had not undergone any change; the under surface of the diaphragm contiguous to the liver had evident marks of  
former



former inflammation; the omentum towards the ala superior was somewhat discoloured, otherwise it was perfect; and the mesentery appeared very dry and contracted. We afterwards sewed up the abdomen, and examined the thorax; the right lobe of the lungs anteriorly adhered very strongly to the pleura; the inferior portion of this lobe was of a white ash colour, and retained the inflated air; the other lobe, with the rest of the contents of the thorax, were entirely perfect; the diaphragm was more convex on the right side of the thorax than is natural in subjects we generally dissect.

### CASE III.

A lad, eighteen years of age, having been as many months at sea, and hitherto very healthy, though of an indolent disposition, was taken ill with a vomiting, acute head-ach, continual thirst and lumbago. In this state he came to the medicine chest; his pulse being full and hard eight ounces of blood were taken away, and an emetic of tartar, with ipecacuanha, was administered; after this had operated

operated well, a laxative was taken, and at going to rest, an opiate to ease the pains and promote the natural sleep; the next day a bolus, composed of two grains of calomel and two scruples of rhubarb, was given, drinking freely of thin congee, his stools were then more numerous, being of a gelatinous substance, and he seemed much easier; in the evening the dormitive draught was repeated, and he slept all night undisturbed by the complaint. On the morning of the ensuing day the dysentery became more violent, with tenesmus and acute gripings in the inferior region of his body. The straining was so violent as to bring down the rectum; this protrusion of the bowel created great heat and pain; his pulse was more moderate and favourable than could be expected, the sickness entirely removed, and he respired freely. The tobacco fumigations relieved the gripings and promoted the intestinal discharge; but when the genial warmth afforded by this application was gone off, the symptoms were equally acute; bladders with water, fomentations, and vinegar made as  
hot

hot as could be conveniently borne, were continually used; the bolus was again repeated, with the opiate at night, and produced the same effect. On moving about, the complaints became general, therefore he was confined to his hammock (as much as possible), and supported with nutritious diet, wine, &c. a blister was applied on each arm, and the following day, on his having a little nausea, an infusion of fenna, together with the warm feeds, and a small portion of emetic tartar, was drank in small quantities. As there was a great coldness about the umbilical region, the fumigation was repeated, and continued as occasion required; his pulse being regular and rather low, without any very acute pains; the decoction of bark, with a small quantity of thebaic tincture (five drops each dose) was taken every two hours this day in small draughts, it sat well on his stomach, and the next day the symptoms appeared less urgent. Flattered by these indications of recovery, we persevered as before; the stools were of

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the same nature, though now more thin than usual, and had a slight offensive smell; the subsequent day some portions of a filamentous substance came away, and continued during his illness. Another perplexing circumstance was, the internal coldness could never be removed. In this manner was the poor fellow afflicted, the prospect growing every day more miserable; the best advice that could be obtained, and every method that had any shew of probability, were now used to snatch him from the jaws of death: but all proved in vain, for on the twelfth day from the attack he expired on the close stool, without any appearance of uneasiness. This body, as the former, changed very black in about fifty minutes, or an hour after his decease; it was washed with vinegar, and removed to be examined, which was done very soon, in order to observe the defects, before the putrefaction was forwarded too much, which would have baffled and thwarted our researches. We began in the same manner with this subject as with the former, and ob-



observed the following circumstances, viz. the peritoneum considerably inflamed, more especially in that part which covers the liver; the external surface of the small lobe of this viscus had several large hydatids of thick purulent fluid lodged in them; the large lobe had not this appearance; that portion of the liver next to the diaphragm was exceedingly red, flaccid, and spongy; the diaphragm was forced up a little convexly into the right cavity of the thorax, and this part of that muscle was very florid and soft, seeming to be in a state of inflammation; the under side of the liver was studded with papillæ, which contained a very small quantity of watery fluid; the gall bladder was full of yellowish green bile, but the biliary ducts were entirely empty. Cutting into the small lobe of the liver, we observed many cysts retaining purulent matter; the large lobe was not so affected; the stomach quite empty; the duodenum above the orifice of the ductus communis cholodochus was coated with a tough buff-coloured sub-

stance; the remainder of this intestine, and the other small bowels were quite perfect. That portion of the colon which passes under the liver, retained some air, otherwise it was in its natural state; the rectum, towards the anus, had three small knotty protuberances on its inner coat, which were of a stony substance, and these were all the traces of disease in those canals; the mesentery and omentum appeared more turgid than common; the kidneys and bladder had not been injured by the illness, the latter contained about half a pint of high coloured urine; the spleen and pancreas were not altered from their usual appearance; the thorax was inspected, and we observed that all its contents were perfectly entire, although there was an adhæSION of the right lobe anteriorly to the pleura.

Such are the observations made from these dissections; which so very nearly corresponded with those of the other patients, who fell victims to the disease, that we imagine a separate relation of  
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each particular case and dissection, or a more minute detail in the clinical part of those already mentioned, would only tire the reader, without adding any illustration to the subject.

The difference between these dissections and those of the learned Sir John Pringle will be very readily conceived; yet we flatter ourselves these will carry a sufficient degree of conviction with them, to prove that the seat of the disease is materially different, consequently the disorder will not wear the same appearance. This is the point we have endeavoured to fix it upon; whether we are right in our opinion, remains to be decided by those who have had more opportunities to determine. All that we presume to advance in behalf of our conclusion is, that the examinations were made with care and attention, during the course of a practice in which no trouble has been spared, or opportunity omitted, that could in the least tend to promote our knowledge of the nature and existence of bilious dis-

eases peculiar to Europeans in the East-Indies. This work is therefore submitted to the public; and if from it any benefits can be drawn, we shall most certainly deem that period the happiest of our lives which has been employed towards alleviating the calamities and distresses of the diseased.

F I N I S.



